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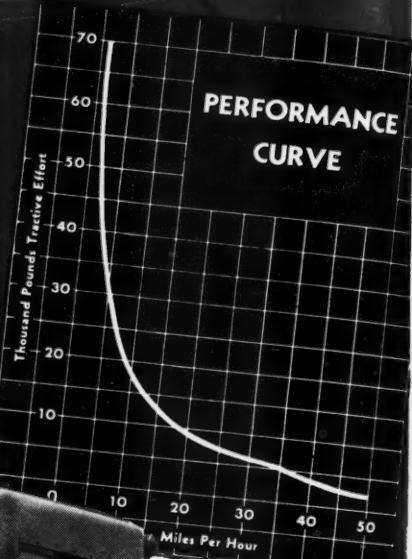
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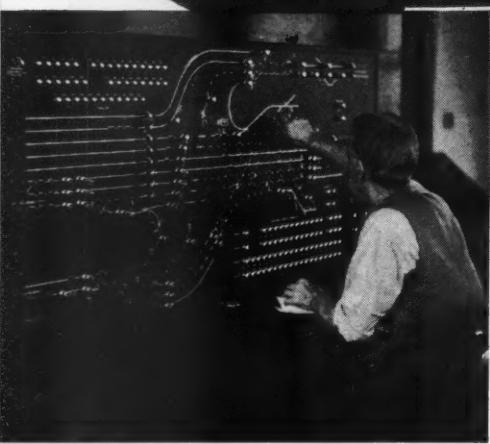
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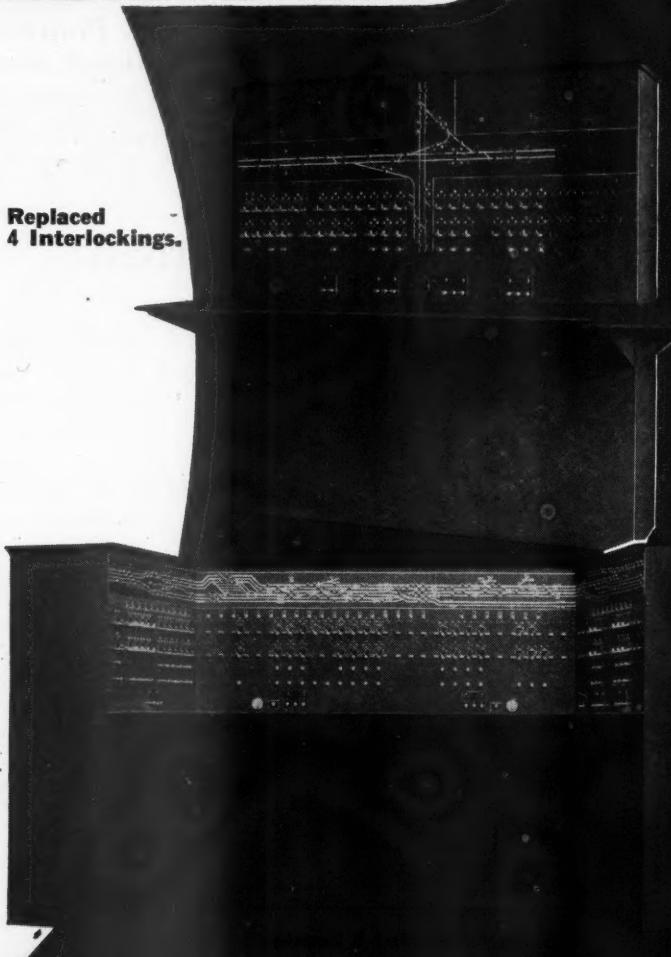


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IN many cases track layouts and local operating conditions are such that traffic can be handled with greater speed, efficiency and flexibility by the consolidation of interlockings. At the same time, substantial economies are effected. The consolidation of interlockings is made entirely practicable by the development of efficient systems for the control of switches and signals from remote points.

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The Week at a Glance

UNHEALTHY CLIMATE: Those who plan for post-war employment and social security should recognize that all such plans will prove futile unless so made and carried out that they will cause a record peacetime production of all kinds of goods. Moreover, no such production can be attained unless accompanied and made possible by a very large investment of private capital in private industry. Such is the theme of this issue's leading editorial which finds it unfortunate that President Roosevelt and others who are so ready to commit the nation to the expense of paying interest on the war debt, of readjusting military men to civil life, and of furnishing post-war employment for all, are not equally ready to create a political climate and framework assuring those who will have to defray the expenses an opportunity to do so.

INVESTORS' DIAGNOSIS: For a specific and vivid example of what an unhealthy political climate can do, the editorial turns to current investment market appraisals of railroad post-war prospects. While the railroads have been handling with unprecedented efficiency the greatest traffic load in history, the average price of their stocks as reported by Dow-Jones has fallen lower than it was at the bottom of the depression in August, 1932. This lack of optimism on the part of investors is attributed to fears that the government will subsidize railroad competitors even more heavily after the war than before, and that railroad wages and taxes will be maintained at levels prohibiting profits after the war.

NO PLACE FOR SOCIOLOGY: Eastern and Southern railroads have filed with the I. C. C. their briefs in the general rate and classification investigation. Like the Western lines, which filed earlier, they take the position that the present class rate structure is lawful, and that the commission is not a sociological body with authority to adjust rates to effect broad social and economic changes in various sections of the country. Their position was supported by governors of various states; while the Southern Governors' Rate Conference sent up their usual cry for "uniform" rates, which was echoed by the Tennessee Valley Authority. But the railroads look for a follow-through by the commission on its chairman's assurance that the case was going to be decided "on the basis of the record—regardless of political considerations."

CLUBS ARE TRUMPS: Government agencies unable to use export rates through Pacific ports because they cannot qualify their shipments under the applicable tariffs made a "heads I win, tails you lose" proposition to the railroads, meanwhile bringing about an I. C. C. investigation as a persuader. The railroads offered to establish the desired rates by contract, provided they would not be subject to land-grant deductions; but the gov-

ernment wanted to have it both ways. So the assistant comptroller general complained to ODT Director Eastman who got in touch with the I. C. C. And that's how the commission's No. 29006 investigation has come about.

NEW YORK CENTRAL, II: New York Central employees have contributed funds for another medium bomber to be called New York Central, II. It will replace the Martin B-26 Marauder named New York Central, I, which they presented to the Army a year ago and which has been retired from service after a spectacular career in fighting over North Africa and Sardinia.

BOTTLENECK BREAKER: That's what centralized traffic control became for the D. & R. G. W. when the installation was completed on the 59.8 miles between Tunnel, Colo., and Chacra, thus covering the entire 107 miles between Dotsero and Grand Junction. The installation is described in one of this issue's illustrated feature articles. It tells how the line, a former bottleneck section that limited capacity of the entire line between Denver and Salt Lake, is now handling 100 per cent more gross tons of freight traffic and about twice as many passenger trains as it was two years ago. And the average time taken by the freights is at least two hours less than in 1941.

HOT-BOX PREVENTION: Adequate and properly-trained inspection forces of individual lines can do much to cut down the number of hot boxes, but the problem still calls for universal action of all the railroads. Such is the view of D. A. Reavis, general foreman of the N. C. & St. L.'s Car Department who believes that some present practices as well as the design of journal boxes and parts need to be changed or improved. Setting forth his views in an illustrated feature article herein, Mr. Reavis outlines what he conceives to be the principles of good practice.

DOLLARS AT \$5.26 EACH: Railroads might have to pay as much as that to build deferred-maintenance reserves under present income-tax laws which treat deferred maintenance as a present net profit rather than as the operating expense it is. This quotation on the deferred-maintenance dollar comes from a recently-issued A. A. R. pamphlet which calculates that, with income-tax rates running up to 81 per cent, a railroad desiring to have a dollar for doing after the war work it would do now if it could, may find it necessary to set aside as much as \$5.26 upon which it must immediately pay a tax of \$4.26. The I. C. C. has recognized the situation so far as it is within its power, authorizing the creation of reserves under certain conditions and restrictions. The A. A. R. calls for an amendment to the Internal Revenue Code which would do likewise, thus making possible a general use of the I. C. C. authorization.

WANTS TO SEE PAPA: A highway subsidiary of the Union Tank Car Company—Refiners Transport & Terminal Company—arranged to buy the properties of another oil trucker, and went to the I. C. C. for authority. The transaction was O. K.'d by Division 4; but now comes the full commission with a reversal, holding that Union must become the applicant. The decision, which does some fine-spun interpreting of the Interstate Commerce Act's consolidation provisions, is reviewed back in the News Department.

JOB PLACEMENT PEAK: Job placements made in June by the Railroad Retirement Board's employment service reached an all-time high. The 36,650 placements were almost double those of May, while this year's first half showed an increase of nearly 70 per cent over 1942's last six months.

MAKE-WORKERS ERODING: Some of the most restrictive make-work rules and laws, effected against the railroads by union pressure, are being removed by action of the I. C. C. While the suspensions are "for the duration" only, one of this issue's editorials suggests that the unions cannot afford to try to reinstate the rules in the post-war period when the railroads' ability to provide jobs will be proportionate to the efficiency which they can display in meeting competition. "Featherbedding" was a principal handicap under which the railroads had to struggle before the war; and it brought opprobrium on the railway unions which otherwise would probably enjoy the highest reputation for public spirit of any groups of organized labor in the country.

CONSTRUCTION INDICES: The 1942 index of railroad construction costs for the country as a whole was up 24 points from 1941—189 as compared with 165. These weighted averages based on 1910-1914 costs as 100 come from the latest issue of the compilation published annually by the Engineering Section of the I.C.C.'s Bureau of Valuation. The breakdown by individual road, equipment, and general-expenditures accounts is shown in a feature article herein.

HOW ATTRACT COLLEGE MEN?: Recognizing the waning interest of college graduates in railway employment during the years immediately preceding the war, the A. R. E. A.'s committee on cooperative relations with universities appointed a subcommittee headed by Assistant Chief Engineer F. S. Schwinn of the M. P., to find out what other industries were doing. The survey covered all general features of recruiting programs; and the report, presented in one of this issue's feature articles, gives an insight into the interest that is being promoted among college students by industry generally, with the purpose of obtaining selected men at the time they complete their scholastic education.

this Wire doesn't owe us a thing!"

In 1907 the Chicago & North Western Railroad wired its then new office building in Chicago with Okonite cable. Recently the company modernized this building and the initial cables and its insulation were so good that the original wire, after more than 35 years of service, was used again in all the changes. Inspection showed no conductor corrosion. The wire insulation was still flexible and could be bent upon itself without cracking. The coverings were in excellent condition. This is the kind of performance record you can expect from ANY Okonite cable.

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Un-retouched photo of
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after 35 years' use.

OKONITE



INSULATED WIRES AND CABLES

3397

RAILWAY AGE

Who Will Pay the Bill—and How?

Those who plan for postwar employment and social security should recognize, first, that all such plans will prove futile unless so made and carried out that they will cause a record peacetime production of consumers' goods, consumers' durable goods, and capital goods; and, second, that no such record peacetime production of all kinds of goods will or can be attained unless accompanied and made possible by a very large investment of private capital in private industry.

President Roosevelt in his July 28 radio address held out a promise of extensive and expensive benefits to returning members of the armed forces. He did not say who is to provide the means of paying for them. His zeal and genius always have been directed to disbursement rather than accumulation—sufficient reason why others must concern themselves about the means whereby generosity may be indulged. Neither Mr. Roosevelt nor anybody else can be generous with what does not exist.

No expenditure of taxes would be so favorably received by those who pay them as expenditure for just and liberal treatment of returning soldiers and sailors, in order to permit them to find their places in civilian life without undue hardship. But if the promises made to returning veterans, and to present and prospective beneficiaries of social security, are to be more than empty words, somebody must provide an enormous volume of products and services. Without production to match all the money promised, the money won't do the veterans and others any good.

American industry and agriculture—business men and farmers—are the only people who can make good, with actual products and services, on President Roosevelt's promises. Unless they can operate at an unprecedented level of peacetime production it will be impossible for them to compensate labor and capital adequately, and have enough left to pay the taxes it is proposed to levy on them.

Specifically, then, what is the railroad industry likely to be able to contribute to postwar employment and production, plus liberal allowances to war veterans and for social security? To contribute its share, it must be able, as after the last war, to make a large investment in rehabilitating and improving its properties. But the average price of railroad stocks, as reported by Dow-Jones, ranged during the last war and postwar periods from as low as \$65.52 in 1921 to as high as \$189 in 1929. With railway net operating income running during the first five months of 1943 at the highest rate ever attained—\$596 million, as compared with \$433 million last year and \$457 million in 1929—the Dow-Jones average never reached \$37.50. Because of reductions of rates and increases of expenses and taxes, net operating income began in June to decline. And prices of railroad stocks have since declined, the Dow-Jones average ranging in the first two weeks of August from \$33.73 to \$34.81—less than in the last two weeks of August, 1932, at the bottom of the depression.

The railroads are not at fault because the investment community regards their stocks no more favorably than it does, unless the fault is that their managements do not increase dividends, which probably would be condemned in Washington as inflationary. They are handling with unprecedented efficiency the greatest traffic load in history. Nor is there any evidence that the nation can dispense with railroad service in future, nor that the carriers are backward in making plans to adjust themselves to postwar transportation developments. The reason for the lack of optimism regarding railroad postwar prospects is the political climate causing fears (1) that the government will subsidize the railroads' competitors even more heavily after the war than before, and (2) that railroad wages and taxes advanced during the war will be maintained at levels prohibiting profits after the war.

Efficiency
FOR VICTORY

But if the railroads cannot sell stocks, they cannot adequately finance needed postwar rehabilitation and improvements.

As private enterprise must provide—if they are to be provided—the means of paying the interest on the war debt, of readjusting military men to civil life, and of furnishing employment for a vast army of workers now engaged in munitions manufacture, it is most unfortunate that those who are so ready to commit the nation to expense are not equally ready to create a political climate and framework assuring those who will have to defray the expense an opportunity to do so. The present prices of railroad securities show that such a political climate and framework are not as yet being provided for the railroad industry.

Post-War Materials

Back of the recent successes of the United Nations in practically all the theatres of war lies the predominant influence of American industry and the men behind our war production achievement. In less than three years American industry, starting from scratch, has outstripped Nazi Germany's six years of preparation and an even longer period of preparation in Japan. Today's weapons, complicated in design and built to such a fine degree of accuracy, are a far cry from their crude counterparts of World War I.

Outstanding developments in metals and their alloys, the overnight production of vast quantities of synthetic rubber, the revolutionary progress in electronics as applied to the control and speeding-up of machines, broad improvements in lighting, the spectacular production and application of plastics—these are a few of the things that have exerted profound influence on the conduct of the war, and which undoubtedly will exert an equally profound influence upon railway materials in the post-war period.

The adaptation of the majority of these new devices, materials and processes to the railway field must of necessity await the end of the war. This is particularly true of the critical metals. Although for the time being the entire production of aluminum and magnesium is devoted to work directly geared to the war program, it is conceivable that once there is a definitely accelerated turn in the tide of war, we may expect the relaxation of governmental controls to the extent, at least, that severely restricted metals will be available for experimental purposes. A great array of new alloys and new methods of fabrication will then be available to the designer of railway equipment, machinery, material-handling and work equipment and tools.

Out of the clash of modern war has come increased development of air conditioning, originally conceived in terms of temperature only; then came the controlled movement of air, followed in turn by the precise control of humidity and the exclusion of dust.

War added a new consideration, the control of air pressure, a condition required for the testing of men and equipment under conditions imposed by stratosphere flying. Today, air conditioning can reproduce a wide range of climates, varying from the frigid cold of the polar regions to the parched heat of the desert—and with equipment that is more flexible and more compact than ever before.

A new conception of the future possibilities of lumber and forest products comes from the lumber mills and the modern wood fabricating plants which, even now, are making tremendous strides in the forming and shaping of laminated lumber and plywood and the development of new glues and bonding methods. Even a thumb-nail sketch of American industry at war reveals innumerable new developments in basic metals and their alloys, a long list of plastics and synthetics developed as substitutes for critical materials, mass production methods that speed production and reduce costs, while science has developed a synthetic bristle that holds the promise of better paint brushes—and infra-red heating tunnels have been developed to the point where drying time for the newly painted product has been reduced to a matter of minutes.

War Is Eroding “Featherbed” Rules

Some of the most restrictive “make-work” rules and laws, effected against the railroads by union pressure, which limit railroad capacity and seriously retard the efficiency of railroad operations, are being removed—as a temporary wartime expedient only—by action of the Interstate Commerce Commission.

One of the most notorious of these arbitrary prohibitions—hampering the operations of one of the principal railway arteries for the supply of war materials and essential civilian transportation to the strategic Pacific Coast area—has applied to the joint main line of the Union Pacific and the Santa Fe railroads through Cajon Pass in Southern California. This rule has forbidden the railroads to operate freight trains of more than 50 loaded cars each (three empty cars to be counted as equal to two loaded ones) between San Bernardino, Calif., and Summit. The Interstate Commerce Commission has ordered the railroads henceforth, for the duration, to operate trains in this district without regard to this restriction, which, the Commission finds, “impedes the use, control, supply, movement, and distribution of cars and equipment, and the supply of trains necessary to a full utilization of transportation facilities, and results in a wasteful use of cars and locomotives.”

As long ago as last fall the Interstate Commerce Commission directed the suspension for the duration of laws of Oklahoma and Arizona which restrict freight trains to 70 cars each—this action being taken

under power conferred upon the Commission by law when it "is of opinion that any carrier by railroad . . . is for any reason unable to transport the traffic offered it so as properly to serve the public."

In addition, the Commission has taken cognizance of other "bottlenecks" where union rules or state laws are seriously impairing railroad capacity to move war traffic efficiently, and has directed the suspension of such limitations. In some cases state regulatory commissions have taken parallel action to remove such arbitrary handicaps to efficient wartime transportation—notably in California, where the State Railroad Commission has authorized railroads, in a temporary order, to disregard the state's "full crew law" (i.e., a requirement for supernumerary employees) wherever shortages of manpower make it impossible to secure "full" crews.

The unions involved have protested such orders by the Interstate Commerce Commission, and have challenged its legal right to issue them—a question upon which the Commission is now weighing the arguments of the interested parties.

Thus are being suspended, but "for the duration" only, some of the most flagrant "make work" restrictions imposed by unionism on the railroad industry—limitations which, generally known as "featherbedding", have brought opprobrium on the railway unions, which, except for these anachronistic and unprogressive rules—would probably enjoy the highest reputation for public spirit of any groups of organized labor in the country. The question naturally arises: Having surrendered, however reluctantly, these justly-criticized rules in war time, can the unions afford to try to reinstate them in time of peace? The railroads' ability to provide post-war jobs will be proportionate to the efficiency which they can display in meeting competition; and, undeniably, "make-work" union rules were a principal handicap under which the railroads had to struggle before the war in their rivalry with other agencies of transportation.

Monopoly Practices and Government Spending

There is a relationship between (1) monopoly practices by private business and labor unions, and (2) unemployment and demands for huge government spending, that those demanding a full return to private enterprise cannot afford to disregard. The program of government spenders is of especial concern to railroads and railway supply manufacturers, because it includes not merely spending on competitors of the railways, but also government acquisition of railway tracks and terminals in order that large government expenditures can be made on them—the inevitable result of which would be complete government ownership and operation.

Why, then, the theory that enough employment can-

not or will not be provided by private enterprise? The public desire for every kind of necessity, comfort and luxury is unlimited. Therefore, the *potential* market for consumers' goods—durable and other—and for all means that will increase their production and distribution, is unlimited.

Only the people individually can decide and show what they really want. Almost everything they have heretofore bought has been a demand on *private enterprise*. And there has been much more real democracy in this than in politics. For when individuals buy, they vote intelligently for what they want, whereas in elections they usually vote on issues they do not understand and for candidates they know little or nothing about.

But a large majority never have been able to buy anywhere near all they have wanted to. Even in periods of prosperity their incomes have been too small. In depression many have been unemployed and had little or no incomes. But why, when the people afford an unlimited *potential* market, has not private enterprise provided opportunity for all who have desired to be in business, or to be employed, to make aggregate incomes sufficient to buy all that private enterprise could produce and desire to sell?

There has been lack of necessary balance between prices and incomes in different industries—prices and incomes in some too high and inflexible, as compared with others. What has caused this lack of balance? Largely, price and wage fixing by *competition* in some industries, and by *monopoly practices* in others. This has resulted in unemployment in the monopolistic higher price and wage industries because they could not sell as much as they could produce to the lower price and wage industries. And the curtailment of employment in them has reduced demand from, and spread unemployment to, the lower price and wage industries.

Government planners contend this lack of balance between different private industries cannot, or at least will not, be remedied. Therefore, the unemployment it causes cannot, or will not, be prevented. Therefore, huge government expenditures will be necessary to prevent unemployment. They even contend that the high and inflexible wages which mainly cause high and inflexible costs and chronic unemployment in some industries—such as building—should not be changed, but that additional employment should be provided in these industries by government spending which (at the expense of the taxpayers) would subsidize those it employed.

This is a challenge to private enterprise to make such reforms in its own practices, and to struggle for such reforms in labor union practices, as are necessary to enable private industries to provide a market for all that can be produced by all that private industries should employ. And it is a challenge which cannot be successfully met excepting by naturally competitive private industries setting labor unions an example of restoring the competition necessary to economically sound balancing of prices.

Personnel Methods

Need Attention Now

The proper handling of personnel—selection, training, promotion, and treatment—is a “problem” which underlies all other railroad “problems”, but it receives comparatively little specialized study and consideration. There are several railroads which have adopted scientific practices for dealing with personnel matters, but, even on these railroads, the application of these practices is usually not system-wide; and it is probable that the railroads most advanced in dealing with these questions are somewhat less up-to-date and thorough-going than the most advanced manufacturing concerns.

To the extent that the railroads, in peace time, are not able to earn adequate returns—that is a problem upon which labor union policy and relations with the public have an important bearing, and union policy and public relations are matters which are, in the long run, determined by a railroad’s personnel practices, i.e., by the kind of employees a railroad hires, how adequately it trains and informs them, and how it treats them.

Consider, for instance, the matter of courtesy in dealing with war-time customers. Railroad managements understand its importance in its likely effect on the railroads’ post-war position in public esteem. Probably the great majority of railroad employees also appreciate *their own interest* in so dealing with the public, when it *has to* use the railroads, that it will *want to* use them when alternative means of transportation are available. Nevertheless, there appears to be no *system* in use by which an appreciation of this vital consideration can be inculcated in the minority of employees who are slow or unwilling to learn. At any rate, instances of gross courtesy by employees, even on some of the best-operated railroads in the country, persist despite all efforts managements have so far developed to eliminate them.

There are, by contrast, many merchandizing and public service industries which do not permit a new employee to come into contact with the public until he has shown his understanding and mastery of the technique needed to leave a favorable impression.

Obviously, with the present difficulty of securing sufficient personnel, the railroads cannot now install a comprehensive program of dealing intelligently and scientifically with all phases of staff selection, training and the kind of treatment at all times which will enlist the full co-operation of all employees. However, there is a great deal that can be done, even now, at least to improve conditions in this area. One of the most progressive and best informed railroad officers in this field offers the following suggestion:

“Right now if I were to select one personnel practice which I would say is more important than any other and one which would probably be more likely to get results, I would say it is the training and education of employees. In a modest way we have engaged in such a program on our railroad, not to the

extent I hope it will eventually be carried but with, nevertheless, substantial results to date. Several thousand employees have received instruction in foreman training, advanced accounting procedures, traffic handling, public speaking, and job instruction and methods.

“I firmly believe that employees who understand their industry take more pride in it, by the same token the more they understand about it the better are their chances for promotion, and promotion is always encouraging. As they are promoted, of course, their earnings increase; their pride in their industry is displayed in their work and in their relations with the public and management.”

Carelessness Costly

The modern steam locomotive, with its reciprocating parts made of alloy steels, carefully designed and proportioned, is a thing of beauty to the mechanical engineer, even if it may not always be the last word in streamlining. It is almost as far a cry from the older locomotives, with their more roughly proportioned carbon steel parts, as is a spirited racehorse from an ordinary nag, although doubtless a host of dyed-in-the-wool railroad fans, with a fascination for the older designs, might object to this comparison.

How frequently in the past have we seen a mechanic or helper in the locomotive repair shop or enginehouse carelessly bang a hammer or hard tool against a connecting rod or axle; or he may have used the upper side of a rod for hammering a piece of metal flat, or for cutting a wire or cotter pin on it. All these things appear harmless enough to the uninitiated, but in the end they may and often do prove terribly destructive. An almost imperceptible dent or nick, or even the roughness caused by a slightly chattering finishing tool, may start a progressive fracture which, in time, will cause complete failure of the connecting rod, crank pin, piston rod or axle. Sometimes these defects are almost microscopic, as when a finishing cut or polishing operation may not entirely remove the traces of the roughing cuts. It seems hard to believe that the forces of destruction will concentrate upon so insignificant a spot as a slight roughness in the fillet on a forged steel part subjected to alternating stresses, and yet experience has demonstrated, over and over again, that this is true.

How can it be prevented and guarded against? Largely by an aggressive and continuing educational program. Carelessness and ignorance can only be overcome by determined and relentless warfare against them. For one thing, every failure of such parts should be followed up, the cause or causes determined, and the facts carried back home to those who were responsible or who may be engaged in working on such parts.

It is important, also, to exercise the greatest care to insure critical inspection of the workmanship on such parts.

Wartime Problem of Hot Boxes*



A discussion of recent changes in bearing design and of others which are needed—The principles of good practice outlined

By D. A. Reavis,

General Foreman, Car Department, Nashville, Chattanooga & St. Louis

IT SHOULD be borne in mind that conditions contributing to hot boxes may not be alike on all railroads. There are, however, certain general conditions that exist on the majority of railroads that are beyond the control of the railroads individually.

The number of hot boxes can be cut down by adequate inspection forces, properly trained, but because of the numerous other factors that contribute to hot boxes, universal action of all railroads is necessary to obtain perfection. It is also felt that some of our present practices, as well as the design of journal box and parts, need to be changed or improved before hot boxes can be substantially reduced.

The present friction journal bearing was adopted over 80 years ago and still consists of the same basic design and principle of lubrication as when first designed. When the design was first adopted the average train speed was very slow and the average lading per car was less than 20 tons. Neither did we have the rough handling of such equipment by hump switching in terminals. Under the present-day operation it is common for freight trains to operate at 60 miles an hour, with each car carrying from 40 to 100 tons.

About three years ago a committee of railroad men, of which J. R. Brooks, supervisor of lubrication and supplies, Chesapeake & Ohio, was chairman, made some constructive recommendations in connection with changing the dimensions of journal bearings and journal wedges. These recommended changes were to insure that the journal wedge would receive all lateral thrust by contacting the box lug instead of the journal bearing. The expected result was to reduce the pinching of journal-bearing lining, thus eliminating spread linings, reducing hot boxes, and effecting economical operation. One year later this committee recommended reducing the length of journal bearing and other dimensions that would relieve the axle collar of end thrusts and excess friction.

* Abstract of a paper presented before the May, 1943, meeting of the Southern and Southwestern Railway Club at Atlanta, Ga.

The Railway Service and Supply Corporation recently made some tests for the Association of American Railroads under the direction of the Special Committee on Journal Bearing Development. In these tests the committee definitely established that reducing the *C* dimension of journal bearing[†] insures the side of the wedge instead of the bearing shall contact the lug at the side of the box. These tests also indicated that the *C* dimension of journal bearing could be reduced to the *N* dimensions and consequently improve the rotation and lift of the journal bearing as well as the axle spread, when subjected to shocks from brake applications with the weight of car body jacked from the trucks. From this test we assume there would be a similar improvement in the dislocation of journal bearing when the car is subjected to shocks from hump switching, etc. Considering the journal-box assembly as a whole—i.e., the axle, lined bearing, wedge and box—this committee also developed that major changes in composition and construction of the bearing can be made without materially affecting the dissipation of the frictional heat generated within the assembly.

We all know from years of experience that hot boxes are caused from numerous things beyond the control of individual railroads, because of the interchange of cars. Some of the causes are shown in the table.

Devices to Prevent Packing from Rolling

It has been my observation and experience that some device to prevent the journal packing from rolling, or some change in the design of the journal box that will accomplish the same purpose, is vitally needed. The waste rolls to the rising side of the journal and the first shock action of sufficient force to dislocate the journal bearing causes a waste grab and a hot box. Waste grabs are causing the largest percentage of hot boxes; a large percentage of such hot boxes occur within fifty

[†] For these dimensions of the journal bearing and wedge, see the A. A. R. Mechanical Division Manual, pages D-24-1942, and D-25-1936.

miles from departing terminals. A recent paper* by C. B. Smith, engineer of tests, Boston & Maine, indicates that one railroad was having encouraging success with a device for preventing waste grabs. Description of the device is as follows: Two strips of wood 1 in. shorter than the length of the journal, are placed from front to back of the journal on top of the waste packing.

These pieces are connected to each other at their outer ends by a strip of steel baling tape which, when

A List of the Causes of Hot Boxes

Weakness of design	Abrasive or cutting particles in packing
Waste grabs	Worn truck and bolster guides
Too much packing	Worn pedestals and journal boxes
Boxes improperly packed	Crown of journal worn flat
Time between periodical repacking dates too long	Bent axle at journal
Dry packing	Tapered journals
Extremely cold weather; extremely hot weather	Back of journal bearing not fitted to wedge
Man failures	Improper workmanship on journals
Improper viscosity of oils at different seasons of year	Unequal distribution of lading
	Overloading

bent into position in the front of the box, holds the wood strips so as to prevent the packing from rising.

Wood Strips Not Satisfactory

The earlier trials with wood strips were not satisfactory, because the pieces were nearly the length of the box extending past the axle collar. What happened to these strips of wood was a most convincing proof of what transpires within the box when the heavy brake applications or severe end shocks occur. The axle collar jammed against wood strips, first denting them and finally breaking some of them and causing splinters to drop on the packing and later to work up under the brass. Splinters were found embedded in the lining of the brass. The present shorter pieces of wood used by this railway are not contacted by the axle collar and, therefore, we are told, giving satisfactory results.

The Atchison, Topeka & Santa Fe is using a device on its passenger cars, possibly for test purposes, to accomplish the same results. This device is made of sheet brass formed in a semi-circle, which covers the portion of journal exposed below the journal bearing. The upper edges of the device have flanges approximately $\frac{1}{2}$ in. wide to prevent wastegrabs entering under the journal bearings. The length of the device is equal to the length of the journal from base of collar to base of back fillet. To provide lubrication this device has 42 holes approximately $\frac{3}{4}$ in. in diameter, located so as to permit the journal packing to protrude and furnish oil between the brass sheet and the journal. The writer does not have any information at present as to the merits of the device, but it should prevent waste grabs and the holes in the bottom of the device for lubrication should retard the rolling of packing.

There is a great potential demand for some effective and economical device that will prevent rolling of packing and waste grabs. These two evils are an evident weakness in the design of the journal box and interior parts.

In the postwar period the railroads will be confronted with keen competition from air lines both on freight and passenger business, on a scale possibly beyond present expectations. Building of better highways to provide work for unemployed will bring trucks to the front in the transportation field. Therefore, if railroads are to

participate in their share of the transportation business, faster speeds must be achieved and delays on the road and in the terminals must be reduced to a minimum. Reduction of hot boxes will play an important part in attaining this goal.

Percentage of Over-Packed Boxes High

A check of a considerable number of cars on various days in a large terminal recently developed a high percentage of boxes as having too much packing. This condition prevails on cars today, notwithstanding the fact the A. A. R. insists on packing being one inch below the center line of the journal.

Too much packing, in addition to causing waste grabs, has a direct effect on the running temperature of the box.

The Railway Service and Supply Company has conducted tests in its laboratory which show conclusively that an overpacked box will reach dangerous temperatures, particularly in the summer time, apparently caused from friction of the packing against the journal and the excess packing precluding the dissipation of the heat. Seven and one-half to eight pounds of packing should be sufficient to repack one $5\frac{1}{2}$ -in. by 10-in. journal box.

The A. A. R. manual of standards covers three kinds of packing for journal boxes; namely, cotton, wool, and cotton and wool mixed, with certain specifications covering each type.

Tests have shown that all-wool packing develops higher running temperatures than all-cotton packing. It is also known that all-cotton waste does not possess the resiliency common to all-wool waste. Taking into consideration that all-wool waste runs at higher temperatures and has a tendency to hold the heat and that all-cotton waste runs at lower temperatures but does not possess the necessary spring-back action, an ideal packing would seem to be a mixture of cotton and wool waste in amounts of approximately 50 per cent each.

Shorter Periods Between Repacking Needed

When the time limit for repacking journal boxes on freight cars was first established, the time limit was set to coincide with cleaning dates of K type air brakes. It was a known fact that freight-car journal boxes should be repacked periodically, but apparently insufficient data were available as to how often the work should be performed. This time limit still stands today in Interchange Rule 66.

Mileage made by freight cars today certainly justifies that the time limit between repacks be shortened; if this period is adequately reduced it will have a definite bearing on the miles made per hot box.

There are numerous journal boxes in service today with the roofs of the boxes, worn concave, which subjects the journal to non-uniform loading, creating excess friction and a hot box.

It is important that all wheel shops check their axle lathes to make sure journals are turned true and free of taper.

Tapered journals cause unequal weight distribution and result in increased frictional heat. A tapered journal will not improve in service.

Too much emphasis cannot be put on quality of workmanship in wheel and axle shops. Periodical checks of such shops as outlined in A. A. R. circular DV-1010 and approved by letter ballot as shown in A. A. R. circular DV-1020, will help toward improving hot-box mileage.

* Hot Boxes a Perennial Problem, page 395, February 20, 1943, *Railway Age*.

Journals put in first-class condition in the wheel shop must be protected when placed in storage. A suitable rust preventive should be applied to the journals that will not be affected by the sun, rain, or snow. The journal coating should be of a type which can be economically removed when applying the wheels to a car.

Wheel sticks should be designed to fit the axle back of the wheel and should never be applied to the polished surface of the journal or collar. The high quality of workmanship performed by the wheel shop can be spoiled in one minute by improper use of the wheel stick.

Extremely cold weather causes the moisture in the packing to freeze, the oil to congeal and the packing to roll. In some cases the packing will roll almost entirely out of the box. Such conditions result in poor lubrication and are potential waste grabs.

When the weather is extremely hot, the temperature dries out the necessary moisture in the packing. Tests have been conducted on various railroads to maintain the proper moisture content during the hot summer months. One railroad applied a gill of water to each box and was having success until the application of water got out of control.

Last year we were having some trouble with hot boxes on refrigerator cars and investigation developed that the ice-bunker down spouts were missing, permitting the salt brine to run in the journal box. We called the refrigerator company's attention to the matter and received prompt action which corrected the conditions complained of.

Our railway is making about fifteen times the mileage per hot-box delay on passenger equipment than it is making with freight equipment. Passenger cars are not subjected to the shocks of terminal handling that cause waste grabs and disrupt the packing. Furthermore, periodical repacking of journal boxes is performed each six months. Passenger cars are equipped with high-speed trucks designed to absorb the vertical oscillations and

lateral thrusts. Passenger cars are not interchanged to the extent common to freight cars.

How Much Does a "Hot Box" Cost?

The cost of a hot journal has been estimated to run from \$20 to \$40 and it is the belief of the writer the higher figure is more accurate. Under present conditions, however, when every piece of rolling stock is needed, the cost of a hot journal is almost inestimable.

One of the factors deleterious to the advancement of design of the journal box and interior parts is the interchange rules placing the responsibility of hot boxes on the handling line. Two of the largest contributors to hot boxes are waste grabs and the present long period between repacks. The repack period can be shortened by proper procedure through the A. A. R., but the waste-grab problem is a weakness of design that has not kept up with the evolution of railroading in general.

If each railroad had to stand the cost of all rough journals on its equipment, I believe we would see all research laboratories busy, and we would begin to see progress made in increased mileage per hot box. Car owners would see that a better class of workmanship was performed on their equipment, would conduct the necessary research to correct the design and eliminate waste grabs.

Placing responsibility of hot boxes on the handling line seems to be on the presumption that each railroad by proper inspection and lubrication of foreign cars can prevent all hot boxes on such cars.

Hot Boxes Should Be Owners' Responsibility

Taking into consideration the various causes of hot boxes and the limited inspection permissible at departing terminals, it would seem more reasonable to make hot boxes an owners' responsibility with certain restrictions applicable to hot boxes occurring to journals on



"Too Much Emphasis Cannot Be Put on Quality of Workmanship in Wheel and Axle Shops"

which wheels were changes, on the same road, within certain time limits.

All railroads would continue to furnish the necessary free lubrication, using the same policy as performing similar work outlined in Interchange Rule 108.

Under present Interchange Rule 44, certain damage is recognized as owners' responsibility due to the understanding cars should be designed of sufficient strength to withstand damaging shocks in regular railroad operation.

We as practical railroad men know, every journal bearing cannot be examined in departing trains, neither would the time spent be justifiable, considering the results to be obtained. Then why block progress by penalizing the handling line?

In recent months the A. A. R. has required all railroads to make monthly reports as to the miles made per car set out account of hot box, separated between system and foreign cars. During November the railroads averaged 543,948 miles per set out; in December they averaged 577,942 miles, for January, 1943, the average was only 386,610 miles per set out. The A. A. R. explained the drop in January was due to extremely cold weather. Contrary to the average made on all roads in January, the N. C. & St. L. made the best record in its history on hot boxes.

In January we averaged on freight cars per hot box delay 576,000 miles and averaged over one and one-half million miles per set out.

Making the best hot-box mileage under present conditions whether figured on the delay or set-out basis depends on a number of things: Proper wheel and axle work as outlined in the Wheel and Axle Manual; proper protection of axles stored for future use; proper maintenance of trucks, adequate inspection forces and oilers at terminals; inspection of cars before departing from terminals (after being switched and placed in outbound trains); making periodic surprise checks of work performance by car inspectors and oilers as well as on repair track.

Car inspectors as well as car oilers should be required to look in all boxes and be held responsible for hot-box performance. The car inspector from his general experience is better qualified to pass on the attention needed.

Supervisors should insist that the car oiler set the packing up under the journal and work it down on the side of the box, not just mechanically poke the paddle in the box and then remove it.

Heads of the mechanical department should have someone designated to make surprise checks at each point at least once per month and should require a report to be made to his office showing the conditions found and the action taken.

Hot-Box Coolants

To improve the miles made per car set out some roads have all cabooses equipped with hot-box coolant sticks for use by train crews to prevent setting out cars on the road when hot boxes are discovered. Printed instructions covering the use of coolant are also posted in all cabooses.

Whether a system of using hot-box coolant to run cars to the next terminal succeeds in increasing the miles made per car set out for hot box depends largely on the amount of business handled, type of business handled, and the policy of the management.

Naturally, treating hot boxes with coolant to enable the car to be moved to the next terminal will require some time, particularly if the box has to be repacked

and a new journal bearing applied. The frequency of trains being run on a division has a distinct bearing on the amount of time available for hot-box treatment and may preclude the use of the treatment.

It may be decided in some cases that the overall delay in setting the car out, repairing, and later having another train stop and pick up the car, equals or exceeds the time which would have been required had the journal been treated with coolant and brassed when first discovered.

Under present conditions there are certain high-class freight trains and military trains which railroads would not want to delay in order to treat a hot box on a less important train.

There have been and will be more cases where a hot box on a car in a military train will have to be treated to run to the next terminal, because the commanding officer of the train refuses to grant permission to set the car out.

Considering the various factors involved, adoption of the use of hot-box coolant is a matter for the management to decide, because both the mechanical and transportation departments are involved.

If the management decides on the use of hot-box coolant, the mere issuance of instructions and carrying supplies will not suffice to get proper results. A suggested procedure is to require the transportation department to wire the mechanical department each time a car is set out on line of road for a hot box. On receipt of the wire the mechanical department can start an investigation to develop if treatment was given before the car was set out, and if not, why not, etc.

Roller Bearings

The preceding paragraphs have dealt with the friction bearing, its weaknesses, defects and maintenance. The post-war period will demand higher speeds of railroad equipment to compete with other forms of transportation. Therefore it is necessary now to consider improvement in design of our present equipment, which will permit such speeds with a minimum of delay and economy of operation. The change in design of the wheel and axle assembly would naturally be to apply roller bearings on all new equipment: freight cars, coaches and locomotives.

The N. C. & St. L. does not own any coaches with roller bearings because it has not purchased any new passenger equipment in several years. It has been our privilege to observe the "Dixie Flagler," a pool train operating over our line between Chicago and Miami, and the coaches in this train are equipped with roller bearings. There have not been any hot boxes with the "Flagler" on our line since the inauguration of the train. This train is equipped with Hyatt roller bearings.

Last year the N. C. & St. L. purchased and secured delivery of 10 new 4-8-4 type locomotives equipped throughout with Timken roller bearings and the performance of these bearings has been beyond our expectations.

It is not the intention of the writer to endorse one type of roller bearing in preference to another, because it is understood all types now in service are doing a good job.

The A. A. R. Lubrication Committee is constantly on the alert, investigating new ideas, testing new materials and designs, and has made considerable progress in the past 12 months. Any suggested change in present journal lubrication should be placed before the A. A. R. where it will be thoroughly investigated by the Lubrication Committee.

C.T.C. on 107 Miles of Single-Track on the Rio Grande

**Expedites train movements on bottle-neck
section through canyon of the Colorado River**

THE Denver & Rio Grande Western now has centralized traffic control in operation on the entire 107 miles of single track between Dotsero, Colo., and Grand Junction, which previously was the bottle-neck section that limited the operating capacity of the entire line between Denver and Salt Lake.

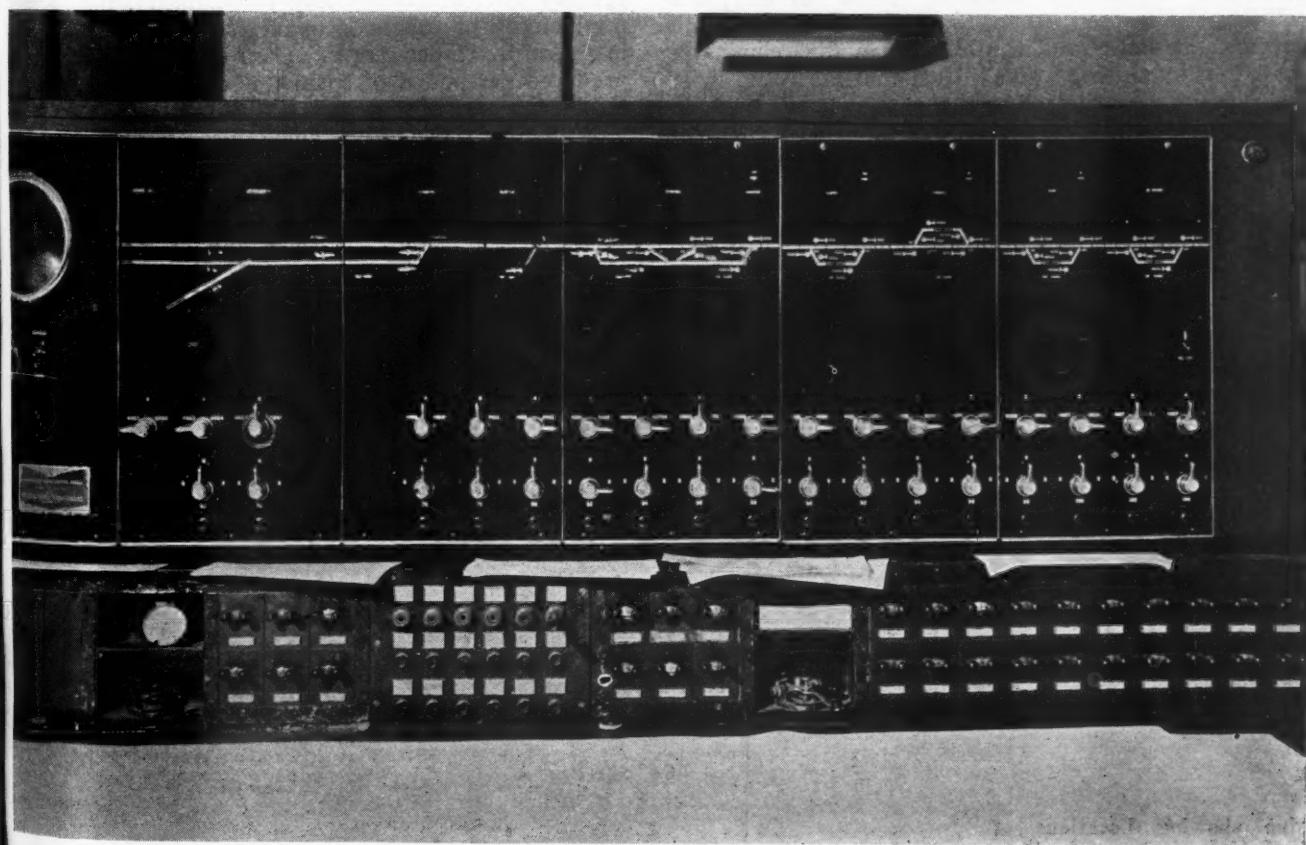
One main line of the D. & R. G. W. extends from Denver south through Colorado Springs to Pueblo, then west through the Royal Gorge of the Arkansas river, over the Continental Divide at Tennessee Pass and down the Eagle River canyon to Dotsero. A second route extends west from Denver over the Continental Divide through the Moffat tunnel, and down the Colorado River via Bond to Dotsero to connect with the Royal Gorge route. Beyond this point, the traffic of both routes between Denver and Dotsero moves over one single-track line for 107 miles to Grand Junction, which is the division point.

Between Dotsero and Funston, 19 miles, the railroad follows along the south bank of the Colorado river through the Glenwood canyon, passing through three tunnels, one of which is 1,700 ft. long. The curves are numerous

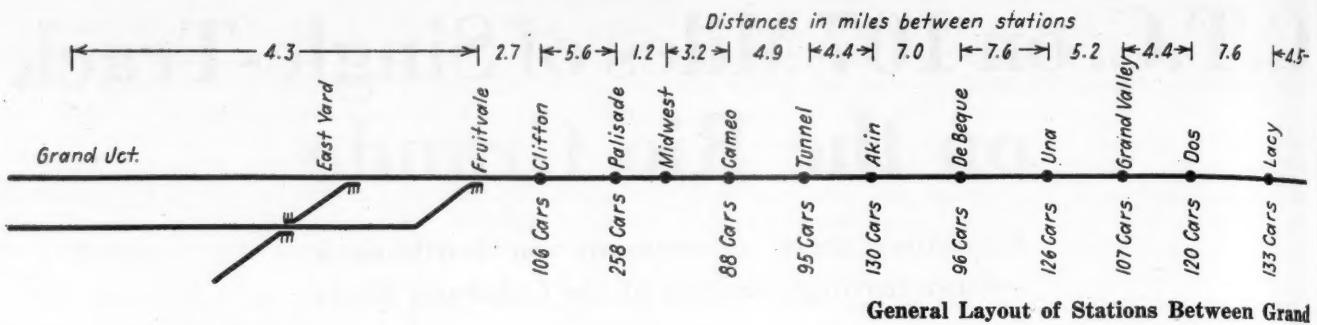
and range up to 12 deg., which require speed reductions to 18 m.p.h. for freight trains and to 27 m.p.h. for passenger trains. The grade ascends from Funston to Dotsero, on an average rise of 1 per cent and a maximum of 1.4 per cent.

Between Funston and Grand Junction, 88.3 miles, the railroad runs down an open valley of the Colorado river. The line is at river grade which is 1 per cent for a large percentage of the mileage, but in no instance exceeds that rate. The curvature is comparatively light, not exceeding 6 deg.; one stretch is tangent for 12 miles just east of Grand Junction.

In 1937, when making track changes and additions to facilitate shipments of fruit at Palisade, as well as to expedite train movements into and out of the Grand Junction yard, a section of C. T. C. was installed between Midwest and Grand Junction, 13 miles. In 1941, in order to relieve train congestion in the Glenwood canyon, C. T. C. was installed on 25.9 miles between Dotsero and Chacra, as well as on 8.1 miles between Midwest and Tunnel. The C. T. C. in service on 21.9 miles on the west end, and on 25.9 miles on the east end of this sec-



Centralized Traffic Control Machine in the Office at Grand Junction



tion left 59.8 miles between Tunnel and Chacra to be operated by time tables and train orders, resulting in extreme congestion. The logical procedure, therefore, was to install C. T. C. on the Tunnel-Chacra section, thus covering the entire 107 miles and the final section of C. T. C. was cut into service in October, 1942.

When preparing for the installation of the centralized traffic control, various changes were made to eliminate as many main line switches as possible. A siding for loading sugar beets at Antlers was moved to connect with the passing track rather than the main line. The stock pens and loading tracks at Silt and at Debeque were moved to connect these tracks with passing sidings rather than the main line. Three passing tracks, at Gravel, Niger and Morris, were eliminated.

Other Improvements

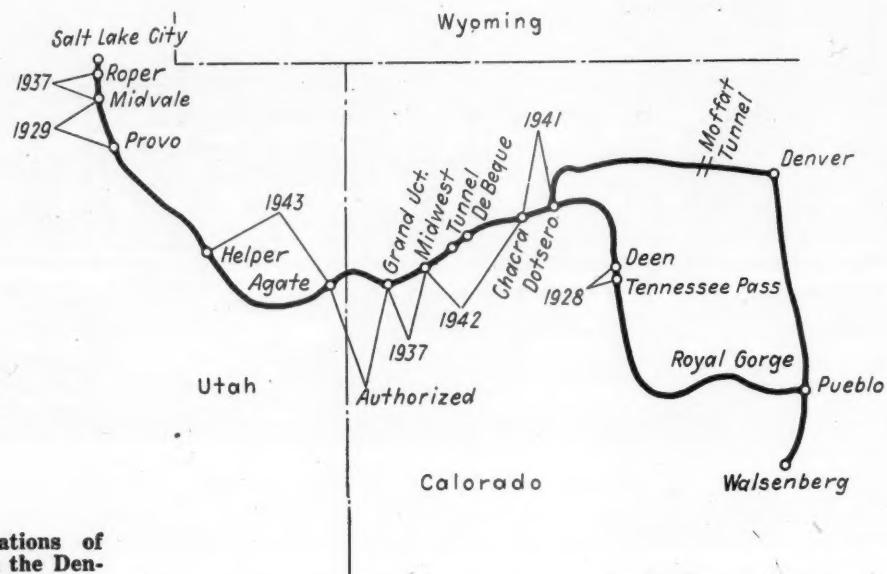
Except in the few instances where it was impracticable to do so, the remainder of the passing tracks were lengthened to increase the car capacities as shown on the accompanying diagram. In order to save train time by increasing the speed at which trains can enter or depart from sidings, the old No. 10 turnouts were replaced with new No. 15 turnouts including 33-ft. curved points, which permit speed up to 37 m.p.h. In these switch layouts, the stock rails are 60 ft. long, thus eliminating rail joints in the switch area. Dual-control electric switch machines were installed at the passing track switches, and electric locks were installed at the hand-throw main track switches leading to house tracks, such as at Debeque. The automatic block signaling was revised as required and semi-automatic C. T. C. controlled signals were installed at the ends of the passing tracks.

A C. T. C. control machine in the office at Grand Junction controls the 33 miles of territory between Grand Junction and Debeque, and a second C. T. C. machine in the office at Funston controls the 74 miles between Debeque and Dotsero. The switches and signals at Dotsero are controlled by a small machine in the office at that station.

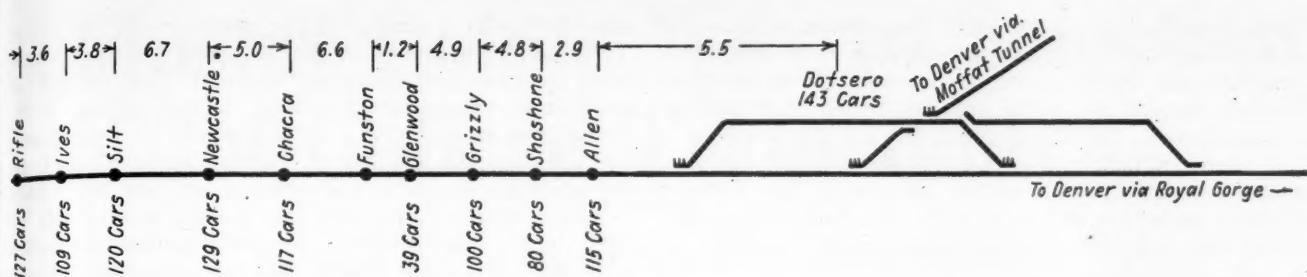
Traffic Increases

Approximately twice as much traffic was handled between Dotsero and Grand Junction in May, 1943, as in May, 1941. The increases amounted to 97.3 per cent in freight gross ton miles and 103.5 per cent in passenger car miles. In handling this heavily increased business, the Rio Grande was faced not only with the problem of arranging meets and passes on a single track district, but also with making the best possible use of a limited supply of locomotives. This involved heavy loading of trains over this district, with smaller engines than had previously been used here. The result was that the average train speed over this district was reduced materially, but the efficiency in power utilization was improved. In spite of a 59 per cent increase in train miles per day (freight and passenger combined), the average productivity of freight locomotives on this district was increased by 16 per cent as measured by gross ton miles produced per pound of tractive effort per hour between terminals.

While this showing was aided to some extent by other factors, there is no doubt that without C. T. C. the result would have been far less satisfactory. Under war conditions, a major problem is to move the fruit and other agricultural products eastward, and at the same time



Map showing Locations of C. T. C. Projects on the Denver & Rio Grande Western



Junction and Dotsero With Car Capacities

move a preponderance of loaded cars of war commodities westbound.

The number of trains operated daily depends on numerous variable factors, which result from a constant shifting of locomotive assignments. Because of the relief effected by the centralized traffic control, smaller locomotives are now used in this territory, the more powerful locomotives being shifted to other districts. When the smaller locomotives are used on eastbound freight trains, helpers are required between Funston and Dotsero. On June 10, there were 14 passenger trains and 20 freight trains, in addition to 7 light engine moves between Dotsero and Funston. On June 11 there were 15 passenger trains and 18 freight trains, in addition to 5 helper moves from Dotsero back to Funston. On June 12, there were 15 passenger trains and 22 freight trains, in addition to 4 light engine moves between Dotsero and Funston. The maximum daily movement to that date was 16 passenger trains, and 23 freight trains in addition to 8 light engine and 2 work trains.

C. T. C. Saves an Average of Two Hours

On numerous occasions the machine at Funston, controlling 74 miles of line, has successfully handled as many as 24 trains in one 8-hr. shift, and at times as many as 19 trains have been in this territory at one time, which somewhat taxed the capacity of the machine to receive the changing indications promptly.

The track-occupancy indications on the C. T. C. control machine show the locations of and progress being made by trains. Based on this minute-to-minute information, the men in charge of the control machines can control the switches and signals to advance trains for close meets. In view of the fact that power switches are in service and that the trains can make diverging moves over the new No. 15 turnouts at speeds up to 37 m.p.h., a train can depart from a passing track, move over a section of main line and into another passing track in 20 minutes less time than if hand-throw switch stands with No. 10 turnouts were in service. The lengthened sidings, ranging from 100 to 154-car capacities, not only accommodate long trains when operated, but also with normal length trains of about 70 cars, permit numerous meets to be made without either train stopping.

With the previous time-table and train order operation, meets and passes had to be set up ahead of time. In the meanwhile if some train did not make the progress anticipated, one or more other trains were delayed at the meeting points, because the dispatcher had no means for changing orders soon enough to take advantage of the changing conditions.

On the other hand, with the C. T. C., the trains keep going, enter sidings, and depart from sidings according to the aspect displayed by the signals. As a result, much time formerly wasted waiting on sidings, can now be used to keep trains moving.

So many changes in locomotives, traffic, and operating conditions have occurred since the first portion of this C. T. C. was placed in service that it is impossible to determine how much train time is saved by the C. T. C. on the 107 miles as a whole. A point of definite consideration however, is that this territory is handling 100 per cent more gross tons of freight traffic and about twice as many passenger trains as it was two years ago, and the average time taken by freight trains moving between Grand Junction and Dotsero is at least two hours less than in 1941. As explained by the operating officers, if the passing tracks had not been improved and the cen-



Switch and Signal Layout at the East End of Una

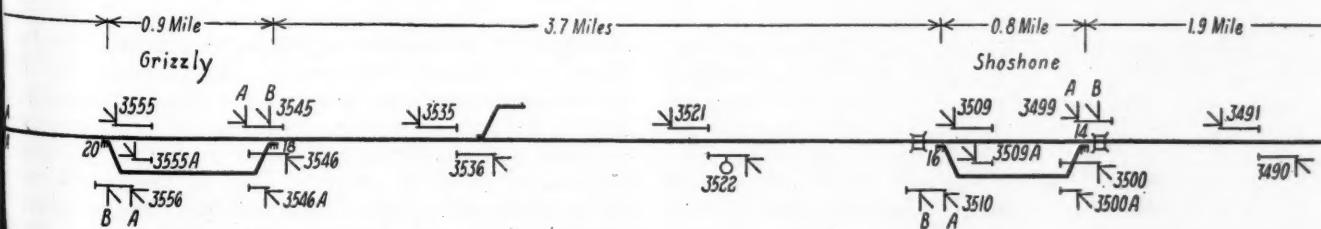


Diagram Showing Typical Layout of Signal at Passing Tracks and at Intermediate Locations

tralized traffic control installed, the present volume of traffic could not be kept moving promptly between Grand Junction and Dotsero, and as a result, the entire line between Denver and Salt Lake City would be limited in its usefulness in the war program.

This centralized traffic control was planned and installed by signal forces of the Denver & Rio Grande Western under the direction of B. W. Molis, signal engineer, the major items of equipment being furnished by the General Railway Signal Company.

I.C.C. Gets More Briefs on Class Rates

WASHINGTON, D. C.

EVIDENCE of record in the Nos. 28300 and 28310 investigations of the class rate structure and Consolidated Classification does not warrant the prescription of uniform class rates and classifications throughout the territory east of the Rocky Mountains, according to briefs filed last week with the Interstate Commerce Commission by railroads serving Official and Southern territories. A like position was taken in the brief filed earlier by Western roads, as noted in the *Railway Age* of August 14, page 279.

The railroad briefs are among several which came to the commission from numerous interested parties, including the Southern Governors Rate Conference, the Tennessee Valley Authority, and governors of various states.

The brief of the Official-Territory roads asserted that the commission was being asked to equalize class rates and classifications throughout the territory east of the Rocky Mountains "solely for the purpose of effecting broad social and economic changes in the country." It went on to contend that the commission was without power to adjust rates solely for these purposes, adding that when the entire rate structure, both class and commodity, is considered "the claims of territorial discrimination arising from freight rates are unfounded."

This brief further contended that under the present rate structures, the industrial development of the South "has been more rapid than that of any other section of the country"; that Southern products "move freely throughout Official territory", and that "to equalize class rates and classifications without recasting the entire rate structure would, in fact, unduly prefer the South to the great prejudice and disadvantage of the North."

In submitting their views, the Official-Territory roads rested with "complete confidence that, in the words of the commission's chairman, 'This case is going to be decided on the basis of the record and according to the commission's best lights, regardless of political considerations.'" The quotation comes from the record of the hearings.

The general position of the Southern roads is that present rates meet the needs of commerce. Their brief asserts that notwithstanding agitation "from certain quarters," there is "no general dissatisfaction with the present rate structure on the part of industries and shippers in the South, or on the part of those who ship to the South." Evidence of record is found to "refute any suggestion or claim that the present rate structure has operated in any way to retard the industrial development of the South"; on the contrary, the South's growth under the present rate structure "has been little short of phenomenal."

Referring to cost studies prepared by Ford K. Ed-

wards, chief cost analyst of the commission's Bureau of Transport Economics and Statistics, the Southern roads' brief contends that there is "no proof" that the cost of conducting transportation service is not higher in the South than in the North. "Computations of purported average costs, either actual or relative, can have little bearing upon the issues in this proceeding," the brief adds.

The Southern Governors Rate Conference, which has been the principal contender for uniform class-rate scales, asks the commission to find that the present adjustment is unlawful. It contends that the territory east of the Mississippi should be considered as one territory with a uniform maximum first-class scale and uniform classification ratings. The Southern governors prefer to have the Official-Territory scale and classification prescribed, but would not object to whatever basis the commission determined—provided there was uniformity. They "insist" on that.

The TVA seems disposed to give the commission a little more leeway. It wants one classification for application in all territories; but it would not object to such differentials in "one system of class-rate scales" as the commission may find necessary to maintain "a reasonable margin between rates and unit costs in each of the territories."

The brief filed on behalf of the six New England governors and various New England business organizations takes the position that the existing basis for the construction of class rates is reasonable and non-prejudicial "in that it reflects transportation conditions and permits the full and free movement of traffic." Likewise do these New England interests think that the existing territorial classifications are lawful.

Governors of New York, New Jersey, Pennsylvania, and Maryland also filed a joint brief. They take the position that the commission "cannot properly find that the present class-rate structure or the present class rates are unlawful because they are on different levels, mile for mile, in the several classification territories"; and that it "could not without greatly exceeding its statutory authority" prescribe by order a uniform level of class rates or direct the railroads to establish such rates. With respect to the classification, this brief contends that a "complete lack of evidence" precludes a commission finding that the present classification is unlawful. It does concede, however, that the commission could have its staff prepare a tentative uniform classification, and, after hearings, determine whether the existing classifications were unlawful to the extent that they differed from it.

Meanwhile Secretary of Interior Ickes has made a pronouncement on the interterritorial freight rate controversy, saying that "equalization of industrial opportunity for all sections of the country requires a re-examination and revision of the freight rate structure." Mr. Ickes spoke thus in a recent letter replying to Senator Stewart, Democrat of Tennessee, who had written to endorse the equalization of gasoline rationing as proposed by Mr. Ickes in his role of petroleum administrator for war.

"In your letter you pointed out that the freight rate structure of the nation impedes the industrial development of the West and the South," Mr. Ickes wrote. "The power and reclamation programs of this department and the TVA on the Columbia, Colorado and Tennessee river systems and elsewhere will never result in full industrialization of those areas so long as the freight rates favor the East. I agree with you that there is no more excuse for granting rate favoritism to one section of the country than for granting gasoline favoritism to another."

Industry Points Way to Selection of College Trained Men

Railway can profit by studying practices found desirable by manufacturers and service companies to strengthen operating and supervisory personnel

THIS report offers an extensive review of the attitude taken by industry generally toward the employment of college men. The industrial groups studied include steel, chemical, automotive, radio, telephone, airplane, electrical equipment, mining and smelting, retail merchandising, oil, textile machinery power, aviation, machine tool, arms and munitions, scientific instruments, banking and construction. Although additional groups might have been included, it is thought that the survey is sufficiently extensive to be considered representative.

The survey covered all general features of the recruiting programs of the various industries, and for identification and ready reference these features are grouped as follows:

Preliminary to Employment

- (a) Developing the student's interest in the industry.
- (b) Indicating the qualifications which the industry expects to find in a finally successful candidate.
- (c) Providing opportunities for part time, vacation or temporary employment for undergraduate students.
- (d) Developing sufficiently comprehensive application and rating forms for gaging the general qualifications of the student.

At Time of Employment

- (a) Arranging for and undertaking personal contacts or interviews with candidates, either on the college campus or at the company's plant.
- (b) Selecting desirable candidates from among the applicants, methods used and responsibility resting upon the company's representative making the selection.
- (c) Classifying successful candidates for the purpose of starting them at the work or in the department for which their education should fit them the best.

Following Employment

- (a) Training methods used and training opportunities afforded successful candidates.
- (b) Measuring or gauging the new employee's services and ability during the training period.
- (c) Advancing new employees during the training period as an incentive to increased efforts.
- (d) Meeting the requirements of contracts and agreements with organized labor groups in the employment of technical or other college men who are not members of such groups.

The letters, statements and other data upon which this report is based were obtained from 27 representative companies and in some cases the information fur-

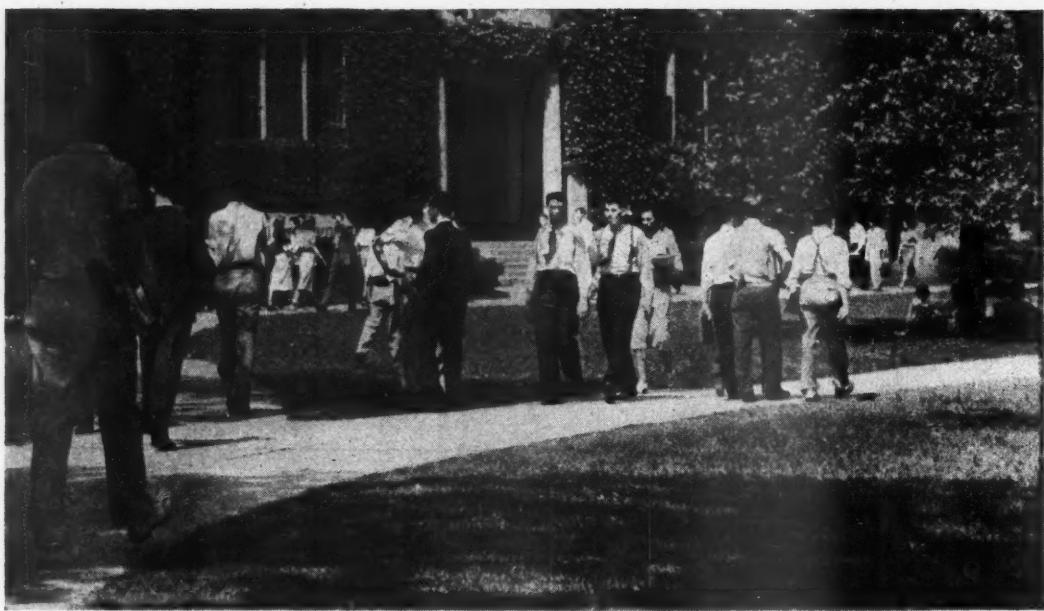
One of the phenomena of the times immediately preceding the war was the waning interest of college graduates in railway employment. In strong contrast, manufacturers, and service and sales organizations were competing actively for each year's supply of graduates. Studies indicate that railway management is to blame for this attitude. This abstract of the report of a sub-committee of the A. R. E. A. Committee on Co-operative Relations with Universities, of which F. S. Schwinn, assistant chief engineer, Missouri Pacific Lines, was chairman, gives an insight into the interest that is being promoted among college men by industry generally, with the purpose of obtaining selected men at the time they complete their scholastic education. The report covers studies of three phases of the recruiting program—(a) preliminary to employment, (b) at the time of employment and (c) following employment.

nished was quite voluminous. Obviously it is not practicable or desirable to quote this information in full and this report will be confined to the several factors having a direct bearing upon the industrial recruiting programs given in the foregoing outline.

Some of the pamphlets mentioned as addressed to the student and others, might be described as automatically eliminating a lazy candidate. At least by inference, they give the student a clear idea of the kind of man desired. Quotations from a few of the industrial officers are of interest.

Kimberly-Clark Corp.: "We cover specifically such items as scholastic attainment, ability to get along with associates, evidence of leadership ability, extra-curricular activities, vacation or out-of-school work experiences, interests and adaptability". The Glenn L. Martin Co. ". . . we look for one with a good background for our type of work, combined with a co-operative spirit, a mechanically inclined mind which is capable of adaptation to new situations, and a definite interest in aeronautical engineering. We like a good student, but high scholastic standing does not always indicate the best engineer".

Many companies distribute books and pamphlets of a descriptive nature to colleges and individual students. Such literature is designed to describe the operations of the industry, illustrate the possibilities offered and outline the special training given to successful graduate candidates for employment. In some cases this liter-



Manufacturers and Service and Sales Organizations Compete Actively for Each Year's Supply of College Graduates

ature also serves the purpose of a reference book to be used by the student as an aid in his studies.

A number of pamphlets are addressed directly to the student and describe the opportunities and special training offered. Even the most casual examination of this literature indicates its value as a medium for initiating and holding the student's interest. It is designed generally to be instructive at the same time that it challenges the imagination and accelerates the initiative of the student. Very often it is prepared in a way that attracts the type of student that is particularly desired by the industry, thereby greatly simplifying the problem of later selections.

Qualifications Expected in a Successful Candidate

Ethyl Gasoline Corp.: "While we do not overstress scholastic standing, it is an important factor since it indicates the ability of the man to take on a problem and carry it to its conclusion. We are interested only in the man who stands in the first third of his class on a scholastic basis. In addition to this we also seek out his extra curricular activities, whether they be in campus club life or in sports. To a large degree such activities give a definite indication of the man's willingness and ability to be with people and to get along with them on a happy basis. Frankly, we do not look for the high pressure sales type of boy, but prefer to have one who is evenly balanced and who really enjoys working with people as well as with engines. We also study the self-help the boy may have obtained for himself by working during school terms or during summer vacations. We examine the type of practical experience he may have gained through this effort, but essentially we are interested in knowing whether he is trying to help himself. One other matter that we discuss with the candidate is his experience in public speaking."

R. H. Macy & Co., Inc.: "The factors we use in weighing the relative value of our prospective employees, and without regard to relative importance, are scholastic achievement, extra-curricular activity, personality, experience, enthusiasm, and the ability to think logically, express himself well and to show those qualities which we believe are essential to a successful retailing career".

The apparent stress placed on the value of extra-curricular activities would appear to be out of proportion

to the importance given other factors. But this is readily understood when it is recognized that such activities reflect the student's interest in life and in his fellow men, as well as his ability to undertake successfully more than may be required by his prescribed course of study.

A large proportion of the industries studied endeavor to give opportunities for temporary employment. What they do and the actuating reasons for so doing are described best by quotations. Aluminum Company of America: "Occasionally we hire young men for summer work in our various research laboratories and production departments and we have found that this makes a good training ground for men who may eventually come with the company on a permanent basis". The Dow Chemical Co.: "To a limited extent we employ college juniors as a means of measuring (them) for permanent employment later". International Harvester Co.: "We realize that there is some value in employing sophomores and juniors for summer work for the purpose of trying them out and giving the students an opportunity to look over our company". Allis-Chalmers Manufacturing Co.: "We believe this (summer employment) is a good idea because it gives the employer an opportunity to see what the boy can do in case we would like to place him after he graduates".

Vacation Employment for Undergraduates

Kimberly-Clark Corp.: "Both undergraduates and graduate students are hired for summer work. It is primarily a recruiting measure and has proved an effective aid to selection. The objectives are to look over future graduates with the purpose of eventually bringing those best qualified into the organization, to train and develop these individuals and assist them in obtaining a background of practical experience, to give them a chance to judge the opportunities available in Kimberly-Clark; to avoid future embarrassing situations we try to select vacation employees of this type as carefully as college graduates who are hired permanently".

General Railway Signal Co.: "We have a definite policy and encourage the employment of college juniors during the summer as a means of selecting persons for employment upon graduation. This has proved most helpful, both to the company and to the student. In several instances we have employed professors during

the summer, which of course helps the university to become better informed concerning our needs and the opportunities for employment in this field". American Telephone and Telegraph Co.: "We believe that this practice (employing undergraduates during the summer) is of very definite value in acquainting us with the qualifications of a certain number of men and enabling them to learn something of the business, both for their own information and in order that they may talk about it with their classmates".

This is one of the recruiting methods frequently adopted by the industries studied and is designed to assist in interesting the best available men. It appears to be highly successful where used. It is noticeable that some employers stress the care with which temporary employees are selected. Such action seems to be very logical and in line with the effort to give permanent employment only to those students who are best fitted for the particular industry's needs.

Recruiting Program at Time of Employment

Almost without exception, the representative companies of the leading industries which might be expected to be interested in the employment of technical graduates arrange for carefully planned personal interviews with the prospects. This was the general practice adopted by all companies studied. A few of the comments in connection with this phase of this report are quoted for the purpose of indicating the extent to which this practice is followed by companies which have adopted it.

International Business Machines Corp.: "Managers of our local offices make the preliminary interviews at the colleges in their territory; the students selected by them are further interviewed, usually by a divisional manager. . . . Personal interviews, plus the giving of various tests, are followed in our selection, the latter point applying particularly to men being considered for technical work". Consolidated Aircraft Corp.: "In general, we never hire applicants without a personal interview. Consequently, each March we contact the placement agencies of those universities that have appropriate graduates and arrange for personal interviews with selected candidates to take place at the respective schools. . . . Our personal representatives have the authority to employ or reject applicants, as dictated by their judgment without recourse to formal tests of any kind".

Ethyl Gasoline Corp.: "When we find a man who seemingly fits our needs, we immediately discuss him with the faculty members. . . . If the faculty opinion coincides with ours in most respects, we feel that we have a man to whom we can make an offer. . . . We make the offers in writing about ten days after talking with them and then we allow about two weeks more for them to reach a decision".

Aluminum Company of America: ". . . interviews are conducted in the schools by a member of the personnel division, plus a plant supervisor. We do not hire any men at a first interview . . . because we do not feel that we can judge a man and his qualifications for a particular job in a 15-minute interview. The outstanding candidates interviewed at the various schools are sent to one of our plants for further interviews with various members of our plant organization. Any offer of employment comes as a result of the second interview. These plant trips are at the expense of the company".

Westinghouse Electric and Manufacturing Co.: "Appointments to the graduate student course normally are made after interviews by Westinghouse representatives

on the various college campuses. Campus visits are arranged for the early months of each year by the Technical Employment and Training Department and interviews are conducted by the personnel of that department, with the assistance of representatives of the engineering, manufacturing and district sales organization. In 1941 approximately 4,000 engineering seniors were interviewed by 98 Westinghouse representatives on 105 college campuses".

Selecting the Candidates

The preceding paragraphs include data regarding the type of man generally considered to be desirable and the report on interviews also describes some of the methods used in making selections. In connection with these undertakings, certain very definite responsibilities frequently are placed upon company representatives. These responsibilities are forcefully outlined in "Procedure Governing Induction of College Graduates into Contract Companies of the United States Steel Corporation of Delaware". The following quotations are taken from this source as representative of the general attitude.

"The basic purpose of this program has been to make selection and satisfactory employment the result of deliberate planning and has resulted in the induction into the business of a reserve of competent manpower from which positions of responsibility may be filled as they occur.

"It has been generally agreed that the maintenance of this reserve is essential and that the contract companies of the United States Steel Corporation of Delaware must continue to attract their share of the most promising men from each graduating class.

"It is important that recruiting representatives be, whenever possible, mill and office executives. Having executives participate in the recruiting activities enables them to obtain a first-hand picture of the graduating talent available and will aid them in administering appropriate development programs for these men, particularly in their early years of employment.

"Representatives on the recruiting committees should be rotated with sufficient frequency to enable the maximum number of executives to participate each year. It should be remembered that to the faculty and student bodies of the colleges visited, members of the recruiting committees represent the entire United States Steel Corporation. In addition to the matter of securing the proper number of trained college graduates, therefore, the impact of these contacts on colleges and college groups is of major importance.

"Offers of employment may or may not be made at the time of the interview, dependent upon the authority vested in such representative by his company. It is particularly important that company opportunities not be oversold to candidates, thereby creating abnormal expectations for promotion and causing undue discouragement and turnover after employment."

Classifying Successful Candidates

Considerable care is exercised by many companies with the view of selecting the man best fitted for the particular position to be filled. A few selected quotations on this phase of the subject should be helpful.

The Dow Chemical Co.: "Regarding the weighing of the relative values of an applicant, if the applicant is being selected for research, considerable emphasis is placed on his scholastic rating and his extra credits in the fields related to the prospective job. Probably scholastic rating is our most important factor in all

employment; however, for service type and sales work the personality factor is the more important".

RCA Manufacturing Co., Inc.: "We arrive at a rating for various traits and past accomplishments. The general desirability of the applicant as an employee is taken as an average of ten items: Character, intelligence, energy, personality, appearance, initiative, dependability, grades in school, extra-curricular activities and experience. His fitness for a particular opening is determined by an evaluation of his specific background and interest, after which the degree of endorsement for a particular opening is determined".

Recruiting Program Following Employment

In almost all cases, the companies offer extensive training courses better to qualify the new employees. As the type and range of such courses vary considerably, a few are outlined briefly:

International Harvester Co.: "Our student executives' course is a 2-year training period, during which students spend 12 months in shop departments receiving working experience on principal operations; 6 months in staff departments such as engineering, production, industrial relations, etc., and the final 6 months on work that will be especially beneficial to them on the work to which they are to be assigned at the time of completion of the 2-year training period". Ingersoll-Rand Co.: "The course has a length of approximately 11 months—months spent by the student in mastering technical details which are necessary to an intelligent and comprehensive understanding of the company's different products. . . . By the time the student has completed his 11 months' training, he should be ready to enter the particular field of service for which he has been found best fitted".

The Standard Oil Co. of New Jersey provides a number of courses under its employee training program, including one designed particularly as a training program for technical graduates. The course lasts about six months and includes suitable work in three New Jersey refineries and in the offices and laboratories of the Standard Oil Development Co. This work is supplemented by six hours' weekly class room work (on the student's own time) and nine inspection trips to refineries during the period of the course.

Allis-Chalmers Manufacturing Co.: "Our program is of two years' duration and is only open to engineering graduates of recognized schools of technology. We do not have a definite outlined program to begin with but place the boys in the various departments of the shop and rotate them from one department to another, giving them the opportunity to select the type of work which they would desire to follow. Most of the boys make up their minds within six months to a year. Once their mind is made up and it is agreeable to us, their course is definitely lined up leading toward the field which they eventually desire to specialize in".

Means for measuring or gaging the service and ability of the new employee are provided by most of the industries studied and some place a great deal of importance upon this follow-up of the student's progress. The Du Pont Company recognizes that the transition from the university to the industrial atmosphere is a difficult one and demands the exercise of patience and persistence. Further comment was that "there will be times when it seems a far cry from a chemical engineering degree at a leading university to a minor job of a manual nature in a busy plant. It does, however, take considerable time for a man, no matter how well educated, to adjust himself to his new mode of living and

working, and to develop in his superiors and associates confidence in his ability".

The Standard Oil Company of New Jersey reports that a complete set of records is kept by the co-ordinator of student training showing (1) job assignments and ratings, (2) attendance, (3) classroom ratings, and (4) a general running report covering the entire program. The Kimberly-Clark Corp. reports that it maintains an up-to-date work history record for each understudy (student) and that his record includes copies of all correspondence, performance analyses, periodic reports and information covering understudy moves in the mills or staff departments.

In its very comprehensive educational program, the Westinghouse Electric and Manufacturing Co. requires that all students prepare formal reports in connection with each shop or office assignment. This requirement acts to stimulate improvement in power of observation, ability to organize one's thinking and capacity for concise and accurate written expression. Each report, as completed, is criticized and becomes the basis of a conference between the individual student and the director and a grade is entered for the report. Students with the RCA Manufacturing Company are graded periodically during their work assignments, on their weekly reports and in each class. Each student is required to maintain a high rating in all his activities.

Advancement During Training Period

A number of companies adopt the policy of increasing the salaries paid to students during the training period. Little was said as to the underlying reasons for such advancement, but it may be assumed that the reason is probably two fold: First, to provide an incentive to increasing efforts on the part of the student, and second, to meet the earning power advantages which may be enjoyed by non-student employees during their earlier years of employment.

Reports of several companies show that such monetary advancement is frequently given to trainees. One company starts student engineers at salaries of \$130 and \$140 per month, which ranges from \$145 to \$160 at the end of 6 months, and from \$160 to \$180 at the end of one year. Another company reports that "these men are paid on a salary basis and receive an increase at the end of the first 6 months and a further increase at the end of 12 months. The rate of pay varies between our operations because of the cost of living differential between cities".

One company establishes the student's salary on the basis of salaries paid students of other companies, the salaries paid to other employees of this company and the student's former salary. Provision is also made for merit increases in such salaries. In all cases, compensation is based upon the requirements of a respectable living.

As one company puts it: "During the first year of training an adequate salary is paid, commensurate with the man's ability and training and substantial enough to assure comfortable living. . . . After the first year of training those men, becoming permanent employees, receive greater compensation and additional savings and insurance benefits".

The committee received no information indicating any serious difficulty because of employee agreements conflicting with the right to employ and train college men. Generally the companies studied treat this class of men as a group temporarily employed for training purposes and from which later selections may be made for permanent employment. Such permanent employ-

ment is usually in positions which do not fall within the scope of any contract with employee groups.

The training employment does not supplant other employees and the work performed by the trainees is not that which is assigned to other employees by agreement. On the other hand, by working in contact with the other employees, they will learn how the several operations of work may be performed properly.

There appears to be no tendency within other industries to secure immediate production in exchange for the cost of training college men. Such cost is not considered as a production cost but, rather, as a cost of developing the company personnel and organization and, probably, the intangible value to the company as a going concern. This statement is not intended to imply that the trainee will stand around with idle hands, but his

(Continued on page 318)

Railroad Construction Indices for 1942

WASHINGTON, D. C.

THE Engineering Section of the Interstate Commerce Commission's Bureau of Valuation has issued its Railroad Construction Indices for 1942, showing that last year's over-all index for the country as a whole was 189, up 24 points from 1941's 165. The indices are weighted averages based on 1910-1914 costs as 100.

The 1942 index for road construction costs was 175 as compared with 151 for 1941. The equipment index at 244 was up from 220, while index of "general expenditures" was up from 152 to 176. The general indices

REGIONS I TO VIII, INCLUSIVE

Tabulation of Indices by Years and by Accounts Applicable to the Entire United States

Acct.	Per Cent	1915	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41	'42			
ROAD																																
1	2.83	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175			
3	18.19	100	110	130	165	190	250	170	143	160	164	149	153	143	135	133	123	118	106	98	100	101	99	103	93	90	90	99	135			
4																																
5	1.51	103	109	128	150	183	208	179	165	179	179	179	178	169	155	155	143	130	119	111	122	120	130	139	141	140	149	160	192			
6	9.41	105	111	146	162	178	206	165	160	176	173	171	170	168	164	163	150	134	122	136	135	141	155	150	149	156	174	210				
7	0.04	102	124	169	177	184	210	150	153	173	171	168	165	163	163	162	154	144	129	122	136	136	137	158	150	149	159	175	209			
8	5.58	100	100	112	133	170	201	189	157	177	175	172	173	175	175	170	155	144	149	147	144	140	134	123	123	124	143	139	139	144		
9	8.57	101	106	121	148	152	168	158	144	145	145	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144			
10	3.39	99	129	198	210	203	209	192	161	182	179	177	177	177	177	177	170	169	165	163	158	150	147	150	169	167	167	170	175			
11	4.09	103	107	114	140	150	207	191	176	175	175	174	175	176	176	176	168	159	146	146	141	139	140	143	143	143	153	170				
12	4.35	100	100	130	163	175	218	174	165	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	209			
13	0.51	100	122	142	178	194	204	189	177	179	179	176	175	175	175	175	173	171	164	147	135	140	140	138	143	144	139	147	165			
14	0.08	103	108	119	165	199	208	197	194	212	200	201	201	204	204	204	198	188	125	126	140	140	140	155	155	155	164	174	174			
15	1.18	104	108	137	161	182	208	171	164	178	175	171	169	166	165	161	153	131	127	139	137	139	152	145	142	146	163	198				
16	4.42	101	115	135	154	185	215	192	180	194	193	188	184	188	188	187	182	165	141	145	151	151	157	166	166	177	188	208				
17	0.51	100	115	136	156	185	216	192	178	196	196	189	187	192	191	190	186	166	140	145	150	150	150	162	162	177	186	206				
18	0.82	101	120	159	170	191	213	185	178	187	187	186	182	185	186	184	177	161	147	151	155	155	156	166	166	172	185	195				
19	0.26	101	120	153	160	190	212	181	166	185	185	182	180	183	183	183	174	159	144	149	154	154	153	159	159	159	163	187	205			
20	2.16	102	118	141	159	188	216	191	180	193	192	188	185	189	188	187	176	161	137	142	147	147	155	165	165	176	188	204				
21	0.09	100	110	128	150	185	214	190	184	197	197	193	190	195	193	193	182	165	137	142	147	147	156	164	164	166	166	200	208			
22	0.04	100	115	135	155	185	210	193	178	198	198	193	189	193	191	191	184	165	137	142	147	147	154	166	166	176	176	195	207			
23	0.53	100	114	133	152	178	204	167	158	175	175	174	177	178	178	172	158	136	141	146	146	149	153	153	153	161	167	212				
24	0.44	101	117	145	155	184	204	170	159	176	176	174	174	176	176	172	157	136	142	147	147	151	153	153	153	160	180	199				
25	0.01	108	122	148	175	194	213	194	176	188	188	186	185	188	189	189	178	163	145	148	176	176	178	178	177	179	188	198	200			
26	0.34	103	124	147	158	164	192	191	162	187	179	163	157	163	165	150	138	121	119	124	128	131	135	129	134	143	156	156				
27	1.49	94	106	132	152	165	175	163	158	165	164	162	169	158	155	154	147	138	130	133	136	138	143	143	146	156	165	165				
28	0.01	104	122	141	158	189	218	197	184	196	196	191	186	191	189	177	162	138	143	148	148	152	167	167	176	194	204	204				
29	0.14	104	122	141	158	189	218	197	184	196	196	191	186	191	191	189	177	162	138	143	148	148	152	167	167	176	194	204	204			
30	0.01	101	117	137	156	187	218	194	180	197	197	192	188	193	191	190	176	161	137	142	147	147	138	164	164	175	187	203	203			
31	0.03	115	166	190	181	186	176	145	132	142	136	140	141	137	142	150	136	116	98	98	103	105	108	123	110	110	114	119	121			
32	0.51	109	148	178	192	189	205	172	163	178	172	175	176	175	178	181	173	148	144	148	148	151	152	155	149	149	155	163	165			
33	0.06	106	116	145	169	194	230	208	179	209	203	185	183	198	199	200	200	172	147	147	150	153	148	157	152	152	172	173	195			
34	0.01	101	110	119	172	206	250	228	214	220	215	220	216	216	219	219	217	215	175	175	175	180	184	185	185	185	190	190	209			
35	0.04	101	117	137	156	186	217	192	179	195	195	190	186	191	190	189	182	164	141	146	151	151	154	161	161	168	178	183	183			
36	0.03	104	124	153	177	205	217	191	190	191	191	191	190	190	190	190	190	181	156	145	145	145	150	150	150	150	150	150	171	190		
37	0.08	105	113	127	146	158	170	162	149	151	151	151	151	151	149	148	147	147	148	147	147	147	147	147	147	147	161	153	154	158	169	169
38	0.05	100	100	179	179	184	202	181	170	173	185	190	190	191	191	190	160	155	155	150	150	160	170	180	180	180	190	200	200			
44	0.95	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	179	179	179	193	206	199	205	212	224	224		
45	0.26	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	179	179	179	193	206	199	205	215	223	223		
46	0.07	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	155	155	150	145	151	151	152	152	158			

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for the country as a whole (shown in the accompanying table) are broken down in the Bureau's compilation into eight regional sets. "The indices," says the statement, "represent territorial index factors and are of value in indicating trends. They are not necessarily applicable for use in the determination of reproduction costs upon individual railroads."

The accounts for which the indices are shown are the several primary accounts designated in the Classification of Investment in Road and Equipment of Steam Roads. They are as follows:

I—ROAD:

1. Engineering
2. Grading
3. Underground Power Tubes
4. Tunnels and Subways
5. Bridges, Trestles, and Culverts
6. Elevated Structures
7. Ties
8. Rails
9. Other Track Material
10. Ballast
11. Tracklaying and Surfacing
12. Right of Way Fences
13. Snow and Sand Fences and Snowsheds
14. Crossings and Signs
15. Station and Office Buildings
16. Roadway Buildings
17. Water Stations
18. Fuel Stations
19. Shops and Engine Houses
20. Grain Elevators
21. Storage Warehouses
22. Wharves and Docks
23. Coal and Ore Wharves
24. Gas Producing Plants
25. Telegraph and Telephone Lines
26. Signals and Interlockers
27. Power Dams, Canals, and Pipe Lines
28. Power Plant Buildings
29. Power Substation Buildings
30. Power Transmission Systems
31. Power Distribution Systems
32. Power Line Poles and Fixtures
33. Underground Conduits

III—GENERAL EXPENDITURES:

35. Miscellaneous Structures
36. Paving
37. Roadway Machines
38. Roadway Small Tools
39. Assessments for Public Improvements
40. Revenues and Operating Expenses During Construction
41. Cost of Road Purchased
42. Reconstruction of Road Purchased
43. Other Expenditures—Road
44. Shop Machinery
45. Power Plant Machinery
46. Power Substation Apparatus
47. Unapplied Construction Material and Supplies

II—EQUIPMENT:

51. Steam Locomotives
52. Other Locomotives
53. Freight-Train Cars
54. Passenger-Train Cars
55. Motor Equipment of Cars
56. Floating Equipment
57. Work Equipment
58. Miscellaneous Equipment

71. Organization Expenses
72. General Officers and Clerks
73. Law
74. Stationery and Printing
75. Taxes
76. Interest During Construction
77. Other Expenditures—General

ployment of college men, it is interesting to record the reasons why they have developed their extensive methods of employment, training and grading for these men. To bring such recruits into the company involves careful planning and supervision as well as a definite expenditure of funds.

Summary

A few comments bearing upon this phase of the subject are quoted:

E. I. Du Pont de Nemours & Co.: "These men are employed because it is felt that there is a need in a particular plant, sales or laboratory organization for promising individuals who have the ability and potentiality to fill intermediate positions and develop into executives in later years". International Business Machines Corp.: "Our program of bringing a young man into the company and properly training him for a specific job and then giving him the opportunity to develop in our organization has proved successful from our standpoint". Ingersoll-Rand Co.: "By an influx of new blood through admissions to the student training course, the company has been successful in steadily building up its organization and equipping it to meet the continually changing demands of our modern and highly competitive industrial world".

The Firestone Tire and Rubber Co.: "We at Firestone regard our college training course as a vitally important factor in our business operations. We look upon it as personnel insurance for the future". The National City Bank of New York: "These men are selected because we feel they are outstanding and are good potential material". American Airlines, Inc.: "Under our four-year apprentice training program we are continually looking for college-trained men and give preference to those who have had technical training in aviation schools or colleges". Allis-Chalmers Manufacturing Co.: "Allis-Chalmers values good men. There are many places in our organization where professional training might fit well in meeting complex problems of this organization". Armstrong Cork Co.: "The only thing we have which no other company can ever have is ourselves—the company personnel selected and trained to work and think together. We build for the future of the business with every man we hire".

Industry Points Way to Selection of College Trained Men

(Continued from page 317)

real productiveness commences when his training is ended and he combines that training with his previous absorption of knowledge gained in the college classroom and laboratory.

In summing up the practice of industries in the em-

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Men and Women Sorting Scrap at Sacramento, Calif., on the Southern Pacific

Railroads-in-War News

Issue New Lists in Manpower Overhaul Classifications of essential and non-essential jobs are freshly drafted

Changes in the rules for inducting men under the Selective Service system were announced last week-end by the War Manpower Commission. The new procedures are expected to hold essential workers in war-useful jobs, to supply men needed for the armed forces without cutting essential production, and to assure transfer of workers to jobs aiding in the war effort, it was explained.

Among steps taken to these ends, a list of critical occupations covering skills urgently needed was announced. Workers possessing such skills "must get into war industry or supporting civilian activities by October 1 or lose further claim to Selective Service occupational deferment," the announcement emphasized. The list of critical occupations accompanying the announcement included 149 categories; among others were named blacksmiths, boilermakers, car inspectors, conductors, diesel mechanics, electricians, locomotive engineers, engineering draftsmen (design), foremen in essential occupations, telephone and telegraph installers and linemen, locomotive repairmen, machinists, signal maintainers, tool makers and train dispatchers. A similar list covering professional and scientific occupations included accountants, chemists, and civil, electrical and mechanical engineers.

It was announced at the same time that local draft boards had been instructed to give "greater consideration than ever before to occupational deferment." They were directed to consider not only the skill of the worker, and replacements available in his occupation, but also the current local shortage of skilled or unskilled labor. New standards for permitting the transfer of civilian workers from job to job, intended to stimulate shifts to more essential work and reduce labor turnover in essential industries, also will be set up, it was pointed out.

At the same time a revised list of non-deferable activities was announced, including various service and commercial occupations not directly connected with transportation or other essential industries.

In explaining the new program WMC Chairman McNutt pointed out that the new critical list does not displace the lists of essential activities and occupations previously published, and revised August 17. He added that the non-deferable list is a

"limited list," including types of employment "plainly" remote from the war effort. If a man's occupation is not on this list, it does not affect him, Mr. McNutt explained.

Occupations not in either the essential occupations list or the non-deferable list are still subject to the rules under which the draft boards have been operating.

The revised list of essential activities includes amendments that have been made from time to time since the original list was made public, it was stated. In addition to a few deletions from the original list, none of which affected transportation industries, changes consist of various additions within the categories previously established, as reported in *Railway Age* of April 24, page 834, including the addition of railroad maintenance workers, already announced in the issue of August 7, page 246.

Railroad Coal Diverted

Because reduced mine output, resulting from "manpower losses," has affected the coal supply required for operation of the by-product coke ovens of the Jones & Laughlin Steel Company in the Pittsburgh, Pa., area during August, Solid Fuels Administrator Ickes has ordered the diversion of 13,500 tons of special purpose metallurgical coal to that consumer. This coal otherwise would have gone to certain public utilities and to the Norfolk & Western, Chesapeake & Ohio and Louisville & Nashville, it was explained.

Special A.T.C. Committee Issues Its Initial Report

The special committee selected by the Associated Traffic Clubs of America to confer and advise with ODT and the I. C. C. on war emergency transport matters recently held a 3-day joint meeting with committees from the N. I. T. League and the National Association of Shippers Advisory Boards and issued an initial report on its activities.

Since the committee's principal function is to act in a consulting capacity and the nature of this work is confidential, the report could say nothing about this phase of its work. Other problems, however, such as light weighing of cars and the refusal of certain receivers to accept freight on specified days of the week, were considered.

The report expressed the confidence of the committee in the ability of the ODT, the I. C. C. and the A. A. R.—in cooperation with other transportation agencies—to handle major transport problems and urged its member units not to seek other means, political or otherwise, in their eagerness to get even better results.

Still Seek Tax and Land-Grant Relief New A.A.R. pamphlets continue educational campaigns on those issues

Two recent Association of American Railroads pamphlets indicate the disposition of the railroad industry to continue its campaigns for repeal of remaining provisions of the land-grant-rate law and for amendments to the Internal Revenue Code which would permit the accumulation of reserves for deferred maintenance without having them taxed as net income.

The pamphlet devoted to the latter subject states that in 1943 roadway work alone—"to say nothing of locomotives, cars and other equipment"—will be deferred in the amount of \$250,000,000, \$185,000,000 of which would be chargeable to operating expenses as maintenance under Interstate Commerce Commission's accounting rules. It goes on to assert that the record wartime traffic "is wearing out railroad plant 25 per cent faster than its service life is being restored"; yet "instead of being treated as an expense, this deferred part of railroad maintenance and renewal is regarded as a present net profit upon which income taxes must be paid."

Attention is called to the fact that the I. C. C. has recognized the situation so far as it is within its power, in regulations issued June 29, 1942, which permit a railroad to set aside funds for deferred maintenance subject to certain conditions and restrictions. Under the present tax laws, and with income-tax rates running up to 81 per cent, the railroads have been unable to make any substantial use of the I. C. C. authorization; because "to have a dollar for doing after the war the work which it would do now if it could, a railroad may find it necessary to set aside not just one dollar but as much as \$5.26, upon which it must immediately pay a tax of \$4.26."

Hence the pamphlet's call for "a simple amendment to the Internal Revenue Code recognizing the fact that the cost of maintenance work which cannot be done now because of war conditions is not a profit but actually an ordinary and necessary operating expense, which should be deducted from current revenue in determining taxable income whenever funds are set aside under strict safeguards of the Interstate Commerce Commission, to do the work after the war is over."

Such relief, it is predicted, "would mean post-war employment not only on the railroads, but in the steel mills, in the mines, in the forests and the timber-treating

plants, in scores of lines of work which would be called upon to supply the materials needed to bring the railroads back to normal."

The pamphlet on land-grant rates presents a brief history of that situation, citing benefits which have accrued to the government over the years. It calls the partial repealer embodied in the Transportation Act of 1940 an effort on the part of Congress to correct the "inequity" of the situation. This enactment, the pamphlet points out, "has completely failed of its purpose" of bringing relief to the railroads; for it left the land-grant deductions on military or naval property which immediately began to move in unprecedented volume because of the defense and war programs.

Taking the Board of Investigation and Research's estimate that land-grant deductions at the end of June, 1942, were running at the rate of about \$20,000,000 a month, the pamphlet calls that "enough in one year to equal more than twice the value of all the lands granted to the railroads at the time of their grant." Meanwhile, government departments continue their efforts to bring "freight of all descriptions"—lend-lease articles, materials for use in cargo ships, etc.—within the "military or naval supplies" category. In the latter connection the railroads "are faced with the alternative of yielding to these extreme demands of government departments or engaging in years of litigation in order to protect their rights.

This controversial situation is listed among the important reasons for complete repeal. Others are the contention that the government has "long since received full consideration for the lands granted, many times over"; the "undue and growing strain" imposed on revenues of certain roads, particularly in the west; the inequalities which the present situation creates among shippers who find it impossible to deal with the government on equal terms.

The pamphlet's list of those favoring repeal includes Director Joseph B. Eastman of the Office of Defense Transportation, I. C. C., National Association of Railroad and Public Utility Commissioners, National Industrial Traffic League, National Association of Shippers' Advisory Boards, United States Chamber of Commerce, American Farm Bureau Federation, American Trucking Associations, and Mississippi Valley Association.

Government Wants Export Rates And Land-Grant Cuts, Too

Government agencies seeking the removal of tariff restrictions which have precluded their using export rates to Pacific-Coast ports are unwilling to accept the railroads' proposal to establish the desired adjustment provided it is not subject to land-grant deductions. Thus the impasse which has brought forth the Interstate Commerce Commission's order instituting its No. 29006 investigation of rates, rules, and regulations applicable in connection with government traffic moving to Pacific-Coast ports for export.

The commission's order instituting the

investigation (See *Railway Age* of August 14, page 289) was followed this week by its announcement that a pre-hearing conference will be held in Washington, D. C., August 30 before Commissioner Johnson and Examiner Berry.

The impasse was revealed in the letter wherein Director Joseph B. Eastman of the Office of Defense Transportation asked Chairman J. Haden Alldredge of the I. C. C. to lay the matter before the commission with the ODT director's request that the investigation be instituted. The letter points out that the transcontinental railroads for many years have absorbed out of the line-haul rates most of the cost of terminal services provided the shipments conformed to the regulations of the carriers' tariffs which stipulate that the freight must not leave the possession of the rail carriers until delivered to an ocean common carrier; the specific destinations beyond the Pacific Coast ports of export must be shown in the bill of lading or shipping order issued at the time of shipment; and that ocean shipping space shall have been secured and confirmed by the ocean steamship line to the terminal railroad line.

It went on to say that interested government agencies consider these tariff restrictions as "unreasonable", especially as applied to government shipments in time of war. Conferences on the matter have brought forth the railroad offer to establish the desired rates on government traffic on the basis of contracts made under Section 22 of the Interstate Commerce Act. The government was agreeable "provided the quotations of the carriers contained no provision against the application of authorized land-grant deduction"; but the carriers "could not agree to include in their offer the benefit of land-grant deduction."

The ODT representations to the I. C. C. resulted from a suggestion made by the assistant comptroller general who "takes the position that the interests of the United States cannot be protected with certainty merely through audit action where the availability of the service desired, on the basis of the export rates, is made to depend upon the existence of unreasonableness or unjust discrimination in the operation of tariff provisions governing the application of rates."

N.Y.C. Employees Donate Another Bomber to Army

A check representing cash donations by New York Central employees to be used to buy a medium bomber to be called the New York Central II, was presented to Robert A. Lovett, assistant secretary of War for Air, by C. D. Tilden, an electrician in the N. Y. C.'s Collinwood locomotive shops on August 17. This is the first replacement bomber ever to be accepted by the Army Air Forces.

The new bomber is to replace a Martin B-26 Marauder named the New York Central I, which was presented to the Army Air Forces by N. Y. C. employees on August 31 last year. This bomber, after a spectacular career in fighting over North Africa and Sardinia, was severely dam-

aged by enemy fire and since has been retired from service.

The New York Central II will be presented to the Army Air Forces at ceremonies to be held on LaGuardia Field on September 12, according to an announcement by Assistant Secretary Lovett.

OPA Lists Its Price Orders

The Office of Price Administration has recently made public a 33-page, double column list, classified according to subject matter, of digests of interpretations of its price schedules, regulations and orders issued up to June 30, including not only specific schedules and regulations, but also the General Maximum Price Regulation and Regulation No. 65, dealing with services. The list is available to businesses and individuals affected.

Grain Door Prices Increased

Sellers of "general manager type" grain doors have been authorized by the Office of Price Administration to charge prices adjustable later to new maximum prices to be established by the OPA, an announcement August 16 indicated. This authority is good until October 15, subject to earlier announcement of the new ceilings.

The higher prices for grain doors are required to prevent their manufacturers from operating at a loss, the announcement explained, since prices on southern pine and northern softwood lumber have been advanced to cover wage increases approved by the War Labor Board. Increases in the price of grain doors will not affect the cost of living, the OPA added, since they will amount to "only a negligible sum in over-all railroad operating costs."

I. C. C. Service Orders

Additional service orders, and modifications of service orders previously issued, have been put forth by the Interstate Commerce Commission to meet the emergency created by a continued shortage of ice at certain points where refrigerator cars are iced or reiced. Service Order No. 147, effective August 13, provided that no railroad shall allow refrigerator cars loaded with green or fresh fruits, melons or vegetables, originating at any point in Arizona, California, Colorado, New Mexico or Utah, to be initially iced or reiced to more than 75 per cent of bunker capacity at any point in the United States. The same order provided further that refrigerator cars loaded with citrus fruits at any point in the same five states shall not be initially iced until after the cars are loaded and tendered to the carrier.

Amendment No. 3 to Service Order No. 133, effective August 14, removed from its specific reicing restrictions refrigerator cars loaded with fresh or green vegetables at points in Colorado or Utah, but retained those provisions for such cars loaded in California or Arizona. Amendment No. 1 to Service Order No. 145, effective August 16, provided that the Union Pacific shall not allow reicing at any point on its lines of refrigerator cars of potatoes initially iced by that road, and required that potatoes loaded at any point in Nebraska on the Union Pacific shall not be initially iced.

until tendered for shipment, and then shall be iced only at Council Bluffs, Iowa, or Kansas City, Kan. A similar restriction limited icing of potatoes loaded at points in Colorado on that road to Denver, Colo., or North Platte, Neb., and applied the prohibition of reicing at points on the Union Pacific to potatoes iced under these provisions.

Another service order, No. 148, effective August 15, issued at the request of the Office of Defense Transportation and the War Food Administration, prohibited railroads from accepting oranges in carload or l.c.l. lots at points in California or Arizona, consigned to interstate or Canadian points, except upon presentation of a permit based upon allotments from the WFA. The ODT explained that this order

was designed to control violations by shippers of WFA weekly volume shipment regulations in such proportions that oranges needed for the military forces and civilians in September and October, before supplies from the new crop can be expected to reach the market, will otherwise soon be exhausted.

The commission also has issued Amendment No. 1 to Service Order No. 142, effective August 18, applying to intrastate as well as interstate commerce that order's restrictions on weighing certain shipments of sand and gravel on track scales. Service Order No. 146, directing the rerouting of traffic due to stoppage of the car ferry between St. Ignace, Mich., and Mackinaw City, was vacated by Service Order No. 146-A, effective August 13.

Materials and Prices

The following is a digest of orders and notices of interest to railways, issued by the War Production Board and the Office of Price Administration since August 14:

Anti-freeze—Amendment 6 to Maximum Price Regulation 170, effective August 16, provides for the withdrawal of grade labeling requirements for anti-freeze as part of the general program to adapt price regulations to the Taft amendment to the Emergency Price Control Act which prohibits compulsory grade labeling. Withdrawn was the requirement that producers mark the strength of the anti-freeze in terms of standard or sub-standard. Packages, however, will be required under this action to indicate the number of gallons of anti-freeze which must be added to one gallon of water to reduce the freezing point of the mixture to -10 deg. F. or, as an alternative, designate by an anti-freeze protection table the amount of anti-freeze needed to obtain the same result. The amendment also contains provisions allowing certain sales of wood distilled methyl alcohol base anti-freeze containing less than 95 per cent by volume of wood distilled methyl alcohol at Type N ceilings.

CMP Regulation 1, Direction 24—Steel shapes, plates, bars, concrete re-inforcing bars and wire products used for re-inforcing concrete in controlled material form, which have been formed, bent, punched, welded, riveted, bolted or painted by the fabricator, or which have been cut to specific size or length for a specific construction project by the fabricator, are to be treated as Class A products instead of as controlled materials, according to Direction No. 24 to CMP Regulation No. 1, issued August 11. In supplying steel products for construction projects, fabricators found that most of the items were Class A products but that there were frequently some items which were actually controlled materials. This meant that, for a Class A product, a fabricator had to receive an order accompanied by an allotment and a preference rating, while for controlled materials he had to receive an authorized controlled materials order. The direction now permits fabricators to accept orders for all steel items going into construction as if they were Class A products. All of the items covered by the direction, however, must be treated as controlled materials by the customer of the fabricator in computing permitted inventories under CMP Regulation No. 2.

CMP Regulation 1, Interpretation 12—Reduction in the quantity of controlled materials covered by an authorized controlled material order does not constitute the placement of a new order, and the reduced order retains its place in the mill schedule, according to Interpretation No. 12 to CMP Regulation No. 1, issued August 13. However, where the quantity of controlled materials covered by an authorized controlled materials order is reduced below a minimum mill quantity, the producer may, when the reduction is made, reject the order and remove it from his production schedule. In removing orders from his production schedule, however, the producer may not discriminate among customers.

Heat exchangers—Amendment 1 to General Limitation Order L-172 as amended, issued August 13, clarifies the fact that purchase orders

for heat exchangers authorized prior to July 9, the date of issuance of General Limitation Order L-172 as amended, are subject to the scheduling provisions of the order unless otherwise directed by WPB in a particular case. The amendment also states that a tube bundle or shell or pressure vessel designed for replacement in a critical heat exchanger in Group I or Group II, as defined in the order, is included in its respective group. Several typographical errors in the order printed July 9 are corrected by the amendment.

Iron and steel—Conservation Order M-126, as amended August 10, comprises a rewording of the original order to simplify its language. The stainless steel list has been omitted in the amended order and articles which were in that list have been incorporated in List A, and the definition of iron and steel has been reworded to expressly include stainless steel. Control of many items on List A has now been delegated to other existing L and M orders. Some have been more restricted and some less restricted, and use of some items on List A has been relaxed in the amended order to permit the utilization of frozen inventories.

Order P-136—Use of preference ratings by scrap metal processors for maintenance, repairs, and operating supplies is now controlled by Order P-136, as revised August 11, instead of CMP Regulation No. 5. Scrap metal processors are persons operating scrap yards or automobile "graveyards" in the United States and Canada. The provisions are as follows: (1) processors of metal scrap must obtain a certificate and serial number before they are eligible to use the AA-2 priority rating for the purchase of maintenance, repair and operating supplies; (2) minor capital additions obtainable under the order are restricted to \$250 rather than to \$500, as in CMP Regulation 5; (3) a slightly different certificate, a copy of which is incorporated in the revised order, is to be used in lieu of the endorsements specified in CMP Regulations 5 or 7; (4) the quantity restriction of CMP Regulation 5, limiting purchases in 1943 to 100 per cent of similar purchases of 1942, has been changed to 120 per cent of 1942; (5) under CMP Regulation 5, those processors whose aggregate requirements for maintenance, repair and operating supplies do not exceed \$5,000 per year are exempt from the quantity restrictions. Under the revision of P-136, the \$5,000 amount has been reduced to \$500 in the case of scrap metal processors.

Asphalt and asphalt products—Amendment No. 6 to Maximum Price Regulation No. 323, effective August 14, provides new methods by which roofing manufacturers determine their ceilings on packaged asphalt. Previously, these manufacturers had taken ceilings provided for producers or resellers, and uncertainty existed in many instances as to which provisions applied. On the average the new ceilings for roofing manufacturers will show no change from those previously observed. Three new ceiling levels, depending on type of sale, are provided roofing manufacturers as follows:

1. For sales, f.o.b. his warehouse, of packaged asphalt purchased from others, the ceiling is the delivered cost to the warehouse, plus \$3.50 per ton on sales to jobbers or distributors and plus \$4.50

per ton when sold to all other buyers. Virtually the same formula is applied when the roofing manufacturer sells f.o.b. his warehouse packaged asphalt produced by himself.

2. If a roofing manufacturer makes a direct shipment to a buyer from the production plant of another person, the ceiling, f.o.b. the production plant, is the price paid for the packaged asphalt, plus \$2.50 per ton on sales to jobbers or distributors or plus \$3.50 per ton on sales to all other buyers.

3. If a roofing manufacturer produces asphalt and makes a direct shipment to a buyer from his own production plant, his ceiling for packaged asphalt, f.o.b. his production plant, is the sum of (a) the delivered cost of roofing flux at his production plant; (b) the difference between the price for roofing flux and that for oxidized asphalt, of the grade produced, listed in the regulation for the reference point closest to the seller's production plant; (c) the charge for the container or package; (d) the packaging differential charge; and (e) \$3.50 per ton on sales to jobbers and distributors and \$4.50 per ton on sales to all other buyers.

Softwood lumber—Amendment No. 2 to Revised Maximum Price Regulation No. 215 (distribution yard sales of softwood lumber), effective August 20, establishes interim price ceilings for distribution yard sales of softwood lumber in two additional specific areas—the Southern and the Florida areas. The interim ceilings, like those issued for most other parts of the country, are in the form of uniform area-wide specific markups which may be added to mill prices by yards to determine wholesale and retail distribution yard prices. The interim ceilings, in substance, are transitional prices for use until final dollars-and-cents maximums for each area are created.

Establishment of interim ceilings for the Southern and Florida areas brings to 93 per cent the volume of the nation's distribution yard business under such ceilings. Only in the Pacific Northwest, Wisconsin and the upper peninsula of Michigan are lumber distribution yard ceilings still provided by the General Maximum Price Regulation. The Southern area, for which interim are now provided, is composed of the states of Alabama, Arkansas, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Virginia. The Florida area is made up of the state of Florida only. The new interim ceilings will bring slight decreases in prices for some sellers, slight increases for others. But in general, they maintain the price prevailing in March, 1942, base pricing month of the General Maximum Price Regulation.

Solder and babbitt metal—Amendment No. 15 to Revised Supplementary Regulation No. 14 (modification of maximum prices established by the General Maximum Price Regulation) to the General Maximum Price Regulation, effective August 10, authorizes sellers of solder and babbitt metal to add to their prices the increased costs resulting from use of Treasury silver sold under the Green Act. The maximum price, henceforth, for any solder or babbitt metal containing silver is established as the highest price the seller charged during March, 1942, plus 9.634 cents per fine troy ounce of foreign silver contained in the product or plus 36.125 cents if Treasury or domestic silver is used.

Special sales of industrial materials—To simplify and speed sales of surplus stores of iron, steel and copper products and other essential war items from industrial stockpiles, the OPA revised Maximum Price Regulation No. 204, effective August 19, to cover pricing of all idle or surplus materials, regardless of whether or not they are subject to any WPB order. Previously, the regulation was titled Maximum Price Regulation No. 204 (idle or frozen materials sold under priorities Regulation No. 13) and covered only items subject to WPB Priorities Regulation No. 13. The title now has been changed to read Revised Maximum Price Regulation No. 204 (special sales of industrial materials), and its context revised so that it makes no reference to Priorities Regulation No. 13. As a result, sellers henceforth will not have to check WPB files to determine whether they must sell a certain material under the regulation. The revision simplifies the regulation's language, incorporates amendments and interpretations, but makes no substantial change in maximum prices for sales of idle or frozen materials. In one addition, the regulation permits utility companies to sell materials, such as copper wire, copper plates, and iron and steel shapes and plates, to each other on the basis of book costs plus 10 per cent for handling, a new simplified method.

GENERAL NEWS

Discrimination on Diner Is Reported But I.C.C. examiner suggests road's rules preclude unfair treatment

Dealing with alleged discriminations in dining car service afforded a group of negro passengers traveling from Tampa, Fla., to New York on the Atlantic Coast Line, a proposed report by Examiner C. E. Stiles recommends that the Interstate Commerce Commission should dismiss the complaint, "as the road's formal instructions to its employees will prevent and avoid such unreasonable prejudice and preference," even though it finds that complaint was justified as to two of the three meals involved.

The complaint was made by 18 negro seamen who were furnished first class passage from Tampa to New York at the expense of their employer, the New York & Porto Rico Steamship Company, as required by a union agreement. All arrangements for the journey were made by the steamship company, not by the individuals, and these arrangements included the provision of meals on June 30, 1942, on a train operating north from Jacksonville, Fla. The examiner's report indicates that there was conflicting testimony as to whether the steamship company arranged to have meals served to the group in the Pullman car that was assigned to them. It was shown that the dining car steward was instructed by his superior officer to serve the group in their Pullman, and the steward testified that he considered this instruction mandatory. No complaint of discrimination was made as to the separation of the group from other passengers except in the service of meals, as they were given the exclusive use of a Pullman containing three drawing rooms and six compartments, though the charge made was for standard berths. It was shown in the record that the group had selected one of their number to act as their representative, and that the steward and other employees on the train dealt with him as the spokesman of the group and did not deal with individual members.

The steward notified the spokesman for the group that breakfast would be served in their Pullman, and offered such service, but it was declined, the complainants insisting that they be served in the dining car. The examiner found that it would have been possible to serve breakfast to the group in the dining car, and concluded that it was their right to demand such service. The road's rules provide that negroes may be served at the same time

as white persons in dining cars provided with curtains to form separate compartments, as was the car involved, and the examiner recommends that the commission should conclude that the complainants were unreasonably prejudiced, and white passengers unreasonably preferred, at breakfast.

It was shown that the steward promptly wired his superior officer for further instructions when the group refused to be served breakfast in their Pullman, and that about 12:30 p.m. he was instructed to serve lunch to them in the diner "after completion of regular meals." This instruction was carried out, and lunch was served the group about 3 p.m., "when all white persons desiring service had been served." No complaint was made as to the meal or service, it being similar to that provided for men in the armed forces. The examiner recommends, however, that the commission find that complainants were unreasonably prejudiced in that they were required to wait until all white persons had been served, suggesting that one end of the car could have been cleared and the group served "during the regular hours of service."

When lunch was finished, the group's representative was informed, upon inquiry, that the steward would send for the group when ready to serve them dinner. The report points out that the train was very heavily loaded after passing Fayetteville, N. C., at 5:15 p.m. carrying 661 passengers between Florence, S. C., and Richmond, Va., where the diner was removed from the train. Service of dinner began shortly after the train left Fayetteville. As there was but one diner on the train it was fully occupied at all times, and the aisles were crowded with passengers waiting for service, until the steward refused to serve more persons in order to clear the car before it reached Richmond about 10 p.m. For this reason the steward failed to notify the group that he was ready to serve them, and they were not served dinner. Perhaps 100 other passengers were unable to obtain service, including a number of service men, the examiner points out.

Although the complainant's representative sent the porter to ask the steward to serve dinner to the group in the diner, and the porter had the Pullman conductor intercede with the steward, the steward was unable to clear space in the diner in which to serve them, due to the crowded condition of the train, the examiner points out, and when the group's spokesman visited the diner to demand service there was insufficient time to provide it before the car was taken from the train. Under these circumstances, the examiner recommends,

(Continued on page 325)

Rules on Car Line's Purchase of Trucker

I. C. C. holds that Union Tank must be applicant when subsidiary is buyer

Reversing its Division 4, the Interstate Commerce Commission has ruled that non-carrier parent corporations of motor carriers must become parties to applications wherein their carrier subsidiaries are seeking commission approval of plans to acquire rights and property of other highway carriers. The commission's ruling came in a report of reconsideration of the No. MC-F-1936 proceeding involving the application of Refiners Transport & Terminal Corporation, a subsidiary of the Union Tank Car Company, for authority to acquire operating rights and property of Marshall Transport Company and certain property of Warren C. Marshall.

As noted in the *Railway Age* of April 17, page 804, Division 4 approved the transaction after denying motions of protestants, including the Department of Justice's Antitrust Division, to dismiss the application on the ground that "Union is the real party in interest and that it is necessary that it be an applicant herein before the commission may authorize the proposed transaction." The full commission's report accepts protestants' view, dismissing the application but deferring entry of the order for 20 days from the date of service of the report "in order to afford an opportunity for Union to file an appropriate application."

Refiners operates generally over irregular routes in the Middle West, transporting petroleum and petroleum products; while the Marshall routes and properties cover tank-truck operations over irregular routes out of Baltimore, Md. The differing decisions of Division 4 and the full commission resulted from differing views as to the applicability of provisions of the Interstate Commerce Act's section 5.

Because the transaction contemplated a consolidation of the acquired property into Refiners, leaving "no separate additional carrier under Union's control," Division 4 ruled that the only applicable provisions of section 5 were those requiring commission approval "for any carrier . . . to purchase the properties or any part thereof, of another." The holding that Union was not a necessary applicant was said to be "in line with our past consistent policy in such cases."

The present report calls the latter statement "not entirely correct." It goes on with citations to assert that: "If we have approved applications in the past where

the factual situation as to the point here involved correspond to that which is presented herein, that would afford no basis for us to administer the statute contrary to its provisions. Our authority extends only to the administration of the statute enacted by Congress, and does not extend to the determination of a 'policy' not expressed in the statute itself."

Meanwhile, the full commission had turned to that other provision of section 5 which requires commission approval "for a person which is not a carrier and which has control of one or more carriers to acquire control of another carrier through ownership of its stock or otherwise." It found this applicable, because "there can be no more positive manner of obtaining control than by outright purchase"; and "it is inconceivable that the outright purchase of another company's franchise and properties through the medium of the already owned subsidiary would have been exempted while the mere purchase of stock control of the other company through the same subsidiary would activate the statute."

"The record," the report said later on, "shows that the proposed transaction is unquestionably one by a person having control of a carrier seeking to secure control of another carrier and, in our opinion, is exactly the kind that the statute is intended to cover. We are confirmed in this opinion by the fact that applicant now has pending before us five other applications under section 5 to acquire motor-carrier operations in New England and in the southeastern portion of the United States."

In the latter connection, Commissioner Splawn in a separate concurring expression, observed that "meager facts of record lend color to the contention of protestants that the proposed transaction is the beginning of an effort to obtain monopolistic control of the transportation of petroleum both by railroad and by motor carrier, contrary to the public interest." He would have denied the application on the ground that the applicant had not sustained the burden of proof that the proposed transaction would be consistent with the public interest.

Commissioners Porter and Miller, who comprised Division 4's majority on the prior report, joined in a dissenting opinion written by Mr. Porter. Commissioner Mahaffie, the other member of Division 4, was with the majority this time, having been a dissenter to the division's report. The Porter-Miller dissent generally upheld the prior report. It asserted that the commission had decided "hundreds of applications like the instant one without the majority stockholder of purchaser being a party applicant; but suddenly the majority penalize this particular purchaser for following the procedures which we ourselves long since established."

Pending disposition of the application Refiners has been leasing the Marshall properties at a rental of \$1,700 a month to be applied on the purchase price. The applicant last week applied to the commission for authority to extend that lease until May 17, 1944, unless it is sooner

terminated by consummation of the proposed purchase.

Bus Revenues for May 38 Per Cent Above 1942

Class I motor carriers of passengers reported May revenues of \$31,206,945, as compared with \$22,614,120 in May, 1942, an increase of 38.0 per cent, according to

having received 26 votes to 9 cast for the K. C. S. Supervisors of Mechanics Association. By a vote of 102 to 28 the National Council Railway Patrolmen's Unions, A. F. of L., won from the American Brotherhood of Railway Police the right to represent the patrolmen, shop watchmen, sergeants and guards of the Northern Pacific.

	Passenger revenue		Passengers carried	
	May 1943	May 1942	May 1943	May 1942
New England Region	\$1,385,502	\$1,097,105	3,972,519	2,771,340
Middle Atlantic Region	3,332,286	2,453,610	7,195,824	4,630,945
Central Region	4,362,741	3,521,112	7,609,696	5,001,132
Southern Region	8,508,225	6,165,157	12,311,022	7,942,542
Northwestern Region	790,732	642,910	704,704	497,140
Midwestern Region	2,639,411	1,882,751	2,118,873	1,361,187
Southwestern Region	5,422,890	3,475,317	7,643,809	3,956,748
Rocky Mountain Region	380,589	224,665	267,721	138,613
Pacific Region	4,384,569	3,151,493	5,253,172	3,578,927

the latest monthly compilation prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission from 172 reports representing 177 bus operators. The number of passengers carried increased 57.6 per cent, from 29,878,574 to 47,077,340.

The breakdown by regions of the bus revenue and traffic figures—excluding data on charter or special party service—is given in the accompanying table.

War Department Upholds I. C. C. In Ex Parte 156

In a brief filed on behalf of the Secretary of War in the Interstate Commerce Commission's Ex Parte No. 156 proceedings the authority of the commission to issue service orders which in effect overrule state laws is strongly upheld. The case grew out of I. C. C. Service Order No. 85, by which railroads operating in Arizona and Oklahoma were directed to disregard laws of those states limiting the length of trains.

The War Department's view is that Congress has lawfully delegated to the commission the power to make regulations affecting interstate commerce, even though they may have the effect of suspending state statutes or private agreements in conflict with such regulations. Unless the commission does have this power, the brief contends, its responsibilities under the Interstate Commerce Act cannot be discharged effectively.

Aside from this point, the brief goes on to emphasize the fact that an emergency arising out of wartime conditions led to the suspension of the train limit laws. Military necessity requires that trains carrying units of soldiers should not be split, it points out, even though many such trains do exceed certain limits dictated by statute or agreement, and the same condition applies to trains carrying prisoners of war.

Representation of Employees

The National Mediation Board, following an election, has certified the American Railway Supervisors Association as the representative of the mechanical department foremen or supervisors of mechanics of the Kansas City Southern, that union

On the Erie the patrolmen (including lieutenants and sergeants) in the police department selected the National Council Railway Patrolmen's Unions as their representative; 72 votes were cast for this organization, 19 for the Erie or superintendent property protection, and 36 for individuals or "no union."

McNear Issues Interim Report on T. P. & W.

George P. McNear president of the Toledo, Peoria & Western, issued an "interim" report on August 16 in which he charges that "featherbed rules" placed in effect on the T. P. & W. when it was taken over by the Government have been abrogated. The report is given over largely to criticisms of statements made by Joseph B. Eastman, director of the Office of Defense Transportation, in a pamphlet issued by that office and entitled "Featherbed Rules," Railroad Manpower and the T. P. & W.

Would Cancel Forwarder's Rate Based on Monthly Tonnage

In a proposed report in the Interstate Commerce Commission's No. 28896 proceedings Examiner T. Leo Haden has recommended that the commission cancel as unjustly discriminatory and not reasonable certain existing and proposed rates under which freight forwarders apply the so-called aggregate tonnage rule to freight movements which amount to a specified aggregate monthly tonnage. The investigation was instituted by the commission on its own motion.

The proposed report deals specifically with certain flat rates published by a forwarder, Mutual Distributing, Inc., applying to freight from any single shipper or to any single consignee at points named in the tariff—that is, from Chicago and Minneapolis and St. Paul, Minn., to points in Minnesota and North Dakota—where the average monthly l. t. l. movement is 50,000 lbs. or more.

Pointing out that "these flat rates are in the nature of a discount in favor of large users" of the forwarder's facilities, the examiner suggests that the forwarder's duty is one of "entire impartiality." The

principle on which these rates are based, he goes on to say, is altogether different from the established principle that carload shipments are entitled to a lower rate on a weight basis than l. c. l. shipments, and its effect is to afford lower rates to a few large shippers than to others, though the freight is handled under substantially similar conditions.

Bills of Lading of Freight Forwarders

Hearings in connection with the Interstate Commerce Commission's investigation into practices of freight forwarders with respect to the issuance of bills of lading or shipping receipts will now be held on September 16 at Washington, D. C., having been reassigned from September 9.

C. & O. Officer Named Deputy Coal Mine Administrator

As a step in the organization of the Coal Mines Administration to bring about "maximum coal production under government control of the nation's coal mines" Coal Mines Administrator Harold L. Ickes has named six chiefs of divisions to serve under the direction of Deputy Administrator Carl E. Newton, and at the same time has appointed Walter J. Tuohy, coal vice-president of the Chesapeake & Ohio, associate deputy administrator.

Ton-Mile Figures Show Smaller Increases Over 1942

Class I railroads in the United States handled about nine per cent more ton-miles of revenue freight in July, 1943, than was handled in the corresponding month of 1942, according to a preliminary estimate prepared by the Association of American Railroads.

In the first seven months of 1943, Class I roads performed nearly 19 per cent more revenue ton-miles of service than in the same period of 1942, 62 per cent more than in the same period of 1941, and 138 per cent more than in the first seven months of 1939.

The following table summarizes revenue ton-mile statistics for the first seven months of 1943 and 1942:

Revenue Ton-Miles of Freight		
1943	1942	Per Cent Increase
5 Months 291,995,270,000	236,303,940,000	23.6
June a 58,000,000,000	53,852,328,000	7.7
July b 62,000,000,000	56,956,174,000	8.9
7 Months 411,995,270,000	347,112,442,000	18.7

a Revised estimate

b Preliminary estimate

Club Meetings

The Canadian Railway Club will hold its next meeting at 8 p. m. on September 20 at the Windsor hotel, Montreal, Que.

The Central Railway Club of Buffalo will meet at 8:00 p. m. on September 9 at the Hotel Statler, Buffalo, N. Y. "Management and Labor" will be the topic discussed by the Rev. William J. Kelley of the N. Y. State Labor Board.

The Anthracite Valley Car Foremen's Association will hold its annual clam bake and outing on August 28 at Ransome, Pa.

The New England Railroad Club will meet at the Hotel Vendome, Boston, Mass., at 6:30 p. m. on October 5, with John J. Pelley, president of the Association of American Railroads as guest speaker.

The Railway Club of Pittsburgh will hold its next meeting at 8:00 p. m. on September 23 at the Fort Pitt hotel, Pittsburgh, Pa. "Recent Developments in the Steel Casting Industry" will be the title of the paper presented by Dr. Charles W. Briggs, technical and research director of the Steel Founders' Society of America, Cleveland, O.

The Paramount movie "Union Pacific" will be shown at the meeting of the New York division of Railroad Enthusiasts, Inc., at 7:45 p. m., on August 27 in Room 2728 Grand Central Terminal, New York. The meeting to be held on September 24 will be "New Haven" night with C. E. Williams, division passenger agent of the road, scheduled to address the meeting on the subject of "The New Haven Railroad Dur-

ing War Times." The New Haven's latest movie, "A Great Railroad at Work," will also be shown at that time.

The Joint Fuels Conference of the American Institute of Mining Engineers and the American Society of Mechanical Engineers will be held at the William Penn hotel, Pittsburgh, Pa., on October 28 and 29.

Bus Mileage Restriction Eased

The Office of Defense Transportation on August 16 revoked its General Order 39, under which operators of local and inter-city buses and taxicabs in the Atlantic coast area where the gasoline shortage has been most pronounced were required to effect a 20 per cent curtailment in mileage operated. The order went into effect May 27.

Provision of larger amounts of gasoline for commercial use in the East has made it possible to lift the restrictions imposed by General Order 39, it was explained,

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 132 Reports (Form 1BS) Representing 136 Steam Railways by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission

(Switching and Terminal Companies Not Included)

All Class I Railways

Income Items	For the month of May		For the five months of	
	1943	1942	1943	1942
1. Net railway operating income.....	\$128,169,023	\$109,667,562	\$596,288,151	\$432,945,838
2. Other income	12,754,060	11,556,253	60,810,278	58,469,736
3. Total income	140,923,083	121,223,815	657,098,429	491,415,574
4. Miscellaneous deductions from income.....	2,362,130	3,154,792	11,839,734	13,052,363
5. Income available for fixed charges.....	138,560,953	118,069,023	645,258,695	478,363,211
6. Fixed charges:				
6-01. Rent for leased roads and equipment	14,176,150	14,778,718	73,131,897	69,384,501
6-02. Interest deductions ¹	36,194,227	37,033,310	181,804,473	185,176,605
6-03. Other deductions	125,623	117,601	625,247	587,528
6-04. Total fixed charges.....	50,496,000	51,929,629	255,561,617	255,148,634
7. Income after fixed charges.....	88,064,953	66,139,394	389,697,078	223,214,577
8. Contingent charges	2,332,997	2,427,750	11,614,148	11,455,477
9. Net income	85,731,956	63,711,644	378,082,930	211,759,100
10. Depreciation (Way and structures and Equipment)	26,469,518	20,213,608	132,628,536	97,243,262
11. Amortization of defense projects.....	11,004,946	6,754,326	51,670,564	26,417,772
12. Federal income taxes	118,558,711	64,483,415	544,787,461	205,639,941
13. Dividend appropriations:				
13-01. On common stock	32,598,851	30,007,342	55,853,135	49,530,145
13-02. On preferred stock	7,067,733	6,674,321	13,446,686	12,607,599
Ratio of income to fixed charges (Item 5 + 6-04)	2.74	2.27	2.52	1.87

Selected Asset and Liability Items

	Balance at end of May	
	1943	1942
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	\$549,723,405	\$474,049,083
21. Cash	1,007,962,913	817,914,286
22. Temporary cash investments	1,316,677,116	177,204,507
23. Special deposits	191,177,937	138,964,351
24. Loans and bills receivable	287,744	1,027,931
25. Traffic and car-service balances—Dr.	43,149,814	39,804,777
26. Net balance receivable from agents and conductors	164,514,115	109,235,564
27. Miscellaneous accounts receivable	573,082,822	288,703,325
28. Materials and supplies	519,237,711	533,690,173
29. Interest and dividends receivable	23,427,433	23,364,126
30. Rents receivable	1,277,115	1,400,882
31. Other current assets	45,858,054	27,838,070
32. Total current assets (items 21 to 31)	3,886,652,774	2,159,147,992
40. Funded debt maturing within 6 months ²	\$185,458,392	\$73,959,834
41. Loans and bills payable ³	15,628,192	16,639,256
42. Traffic and car-service balances—Cr.	144,775,812	81,079,801
43. Audited accounts and wages payable	417,549,340	349,141,098
44. Miscellaneous accounts payable	106,348,995	84,160,026
45. Interest matured unpaid	45,478,545	46,640,249
46. Dividends matured unpaid	6,831,920	4,907,214
47. Unmatured interest accrued	73,745,583	83,575,913
48. Unmatured dividends declared	45,859,457	38,191,385
49. Unmatured rents accrued	30,640,762	29,862,973
50. Accrued tax liability	1,351,672,837	502,720,457
51. Other current liabilities	65,565,813	61,478,361
52. Total current liabilities (items 41 to 51)	2,304,096,956	1,272,396,733
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	1,218,973,113	384,337,633
53-02. Other than U. S. Government taxes	132,699,724	118,382,824

¹ Represents accruals, including the amount in default.

² Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

³ Includes obligations which mature not more than 1 year after date of issue.

(Subject to revision.)

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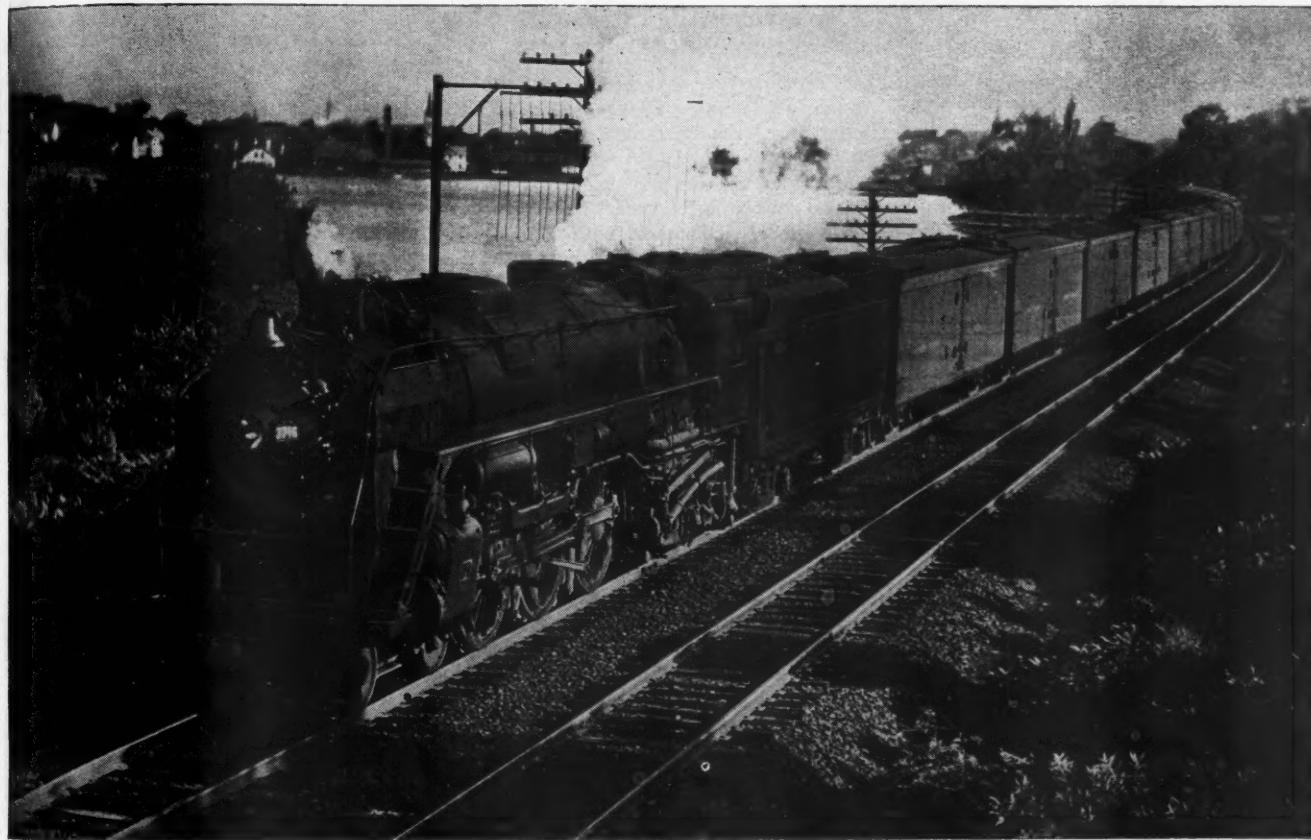
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LIMA LOCOMOTIVES HELP THE B. & M.



MOVE MORE WARTIME FREIGHT IN FEWER CARS

The wartime service rendered by the Boston and Maine covers a vitally important strategic area, linking as it does our own war effort with the Maritime Provinces and the Atlantic embarkation ports of our ally, Canada. The B. & M. is now handling oil at the rate of 120,000 car loads a year, and other unusual all-rail movements are coal, raw sugar and cotton.

As a measure of locomotive service on the B. & M. it may be noted that, while the daily average number of freight cars on line decreased by 2.6%, the net ton-miles actually increased 36.4%. For many years Lima Super-Power Steam Locomotives have helped the Boston & Maine to serve busy New England as they are now helping it to serve this important segment of the war effort.

LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

but ODT Director Joseph B. Eastman accompanied the announcement with an appeal to operators for co-operation in the conservation of equipment and manpower during the "tight" situation resulting from war conditions.

Freight Car Loading

Loadings of revenue freight for the week ended August 14 totaled 887,165 cars, the Association of American Railroads announced on August 19. This was an increase of 15,088 cars, or 1.7 per cent, above the preceding week, and an increase of 18,320 cars, or 2.1 per cent, above the corresponding week last year, but a decrease of 3,172 cars or 0.4 per cent, below the comparable 1941 week.

Loading of revenue freight for the week ended August 7 totaled 872,077 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For the Week Ended Saturday, August 7			
District	1943	1942	1941
Eastern	165,689	156,142	177,718
Allegheny	191,992	186,039	193,543
Pocahontas	55,245	55,245	58,683
Southern	116,977	117,790	120,099
Northwestern ..	143,690	141,867	145,709
Central Western ..	128,097	124,039	127,634
Southwestern ..	70,387	69,099	55,119
Total Western Districts	342,174	335,005	328,462
Total All Roads	872,077	850,221	878,505
Commodities			
Grain and grain products	57,910	41,955	45,888
Live stock	14,149	12,123	9,986
Coal	173,134	163,478	166,434
Coke	14,327	13,878	13,030
Forest products	47,590	53,027	49,119
Ore	88,048	89,036	76,700
Merchandise l.c.l.	98,974	89,182	156,709
Miscellaneous	377,945	387,542	360,639
August 7	872,077	850,221	878,505
July 31	885,514	863,576	882,022
July 24	883,826	855,515	897,564
July 17	877,330	857,146	899,370
July 10	808,630	855,158	876,142
Cumulative Total, 32 Weeks	25,276,505	26,098,757	25,024,694

New Transportation Director In Food Administration

The appointment of Mark Upson, on leave from his position as eastern division manager of the Procter & Gamble Co., Cincinnati, O., as director of transportation of the War Food Administration was announced August 16 by Marvin Jones, War Food Administrator. Mr. Upson succeeds James F. Brownlee, who has been made deputy administrator of the Office of Price Administration. Mr. Upson will "co-ordinate" the transportation work of WFA agencies, the announcement indicated, and will supervise their activities in connection with the movement of foods and farming and processing supplies "within and into and out of the country."

I.C.C. Drops Investigation of Wool and Mohair Rates

The Interstate Commerce Commission has discontinued the No. 28863 proceeding which it instituted a year ago as an investigation of wool and mohair rates between all points in the United States. As noted in the *Railway Age* of August 22, 1942,

page 319, the investigation was hailed in a Department of Agriculture press release as one ordered as a result of a request made by Secretary Wickard under that section of the Agricultural Adjustment Act of 1938 which authorizes the secretary to make complaints to the I. C. C. with respect to rates on farm products.

July Operating Revenues 17.7 Per Cent Above 1942

Preliminary reports for 87 Class I railroads, representing 80.9 per cent of total operating revenues, made public August 18 by the Association of American Railroads, show that those roads in July had estimated operating revenues amounting to \$633,259,351, compared with \$537,894,040 in the same month of 1942, or an increase of 17.7 per cent.

Freight revenues of the 87 roads in July amounted to \$467,456,736 compared with \$429,484,468 in July, 1942, or an increase of 8.8 per cent. Passenger revenues totaled \$124,368,156 compared with \$75,254,976, or an increase of 65.3 per cent.

Discrimination on Diner Is Reported

(Continued from page 322)

the commission should find that the group was not unreasonably prejudiced by the road's failure to serve dinner.

The examiner further points out that the case involves the question whether the road was justified in dealing with the complainants as a group, rather than as individuals, and concludes that it was, in view of the fact that the group elected a representative before boarding the train and dealt with the railroad's employees through him during the journey, and did not come "individually and separately" to the diner to seek service. Under such circumstances the road was warranted in planning to serve the group as a whole, and in failing to notify them that they would receive service individually if they would stand in line and wait their turn, he adds.

The report concludes with a discussion of "enlightening" court decisions on the question of separation of races, and points out that the commission is not required by Section 3 of the Interstate Commerce Act to decide the "social question" raised in the complaint, but has to decide only questions of "inequality of treatment" as prohibited by the statute.

T. P. & W. Foreclosure Suit Dismissed

A mortgage foreclosure suit filed by the Central Hanover Bank and Trust Company of New York asking receivership for the Toledo, Peoria & Western was dismissed by the Federal District Court at Peoria, Ill., on August 16, at the request of the bank. According to counsel for the bank, George P. McNear, president of the road, had satisfied in full the \$35,000 due on first mortgage bonds.

The petition for foreclosure, filed on July 31, was based on the failure of the railroad to pay interest on the mortgage bonds due January 1, 1943. Earlier in the

year, the Office of Defense Transportation offered to turn over to Mr. McNear \$31,200 to pay the interest, the money to come out of the earnings of the railroad properties. Mr. McNear refused to accept the money on those terms, insisting that the funds should be made available out of the "just compensation the government should pay for the seizure and operation of the railroad."

Job Placements by Retirement Board Hit New High in June

Job placements made in June by the employment service of the Railroad Retirement Board reached an all-time high, according to the board's July review. The 36,650 placements were almost double those for May, while the first six months of the calendar year 1943 showed an increase of nearly 70 per cent over the preceding six months.

Through June 30, 6,750 Mexicans had been brought into the United States to work on railroads in the West and Southwest. The original agreement authorized recruitment of 6,000 Mexicans, and a second agreement authorizes importation of an additional 9,360 workers.

Benefit payments under the retirement act for June amounted to \$11,088,039. Employee annuities accounted for \$9,012,919 and pensions for \$1,418,911. The balance was paid to survivors. Applications received numbered 1,852, and annuities certified, 1,521.

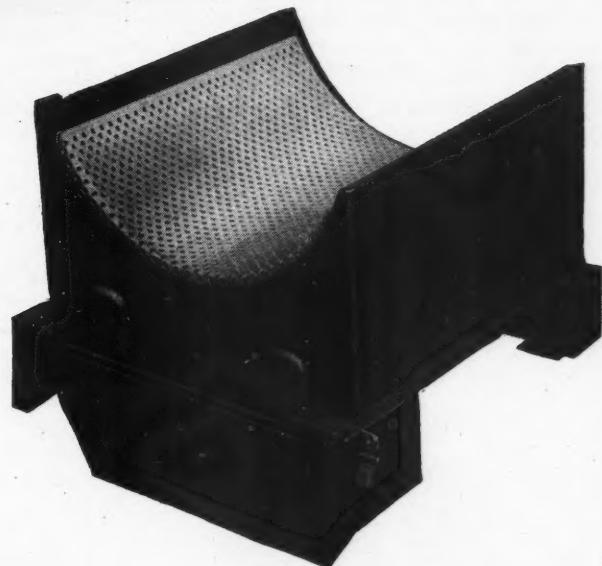
Unemployment benefits in June, in the amount of 38,725, were paid as the result of 1,556 certifications. Workers who experienced their first unemployment in the benefit year filed 422 applications for certificate of benefit rights—a slight rise over the 380 filed in May.

In a review of 1942-43 operations of the board the report states that, "As a result of increased railroad employment and the large labor turnover, 1,045,000 new wage and service accounts were opened for employees covered by the acts. Compensation was reported to the board for approximately 2,650,000 employees during the fiscal year.

"Retirement benefits paid during the year totaled \$130,864,000, an increase of 3.3 per cent over the preceding year. Employee annuities constituted 81 per cent of the total. On June 30, there were 132,000 employee annuities in force, at an average of \$66.10, and 34,300 pensions averaging \$59.11. There were 3,400 survivor annuities and 600 death-benefit annuities in force on June 30 with average monthly payments of \$31.94 and \$35.67 respectively. Certifications for lump-sum death benefits numbered 14,800, and payments averaged \$339.98.

"Unemployment insurance benefits dropped sharply from \$8,890,000 in 1941-42 to \$1,756,000 in 1942-43. Compared with 74,200 the preceding year, only 15,400 workers received benefits for periods of unemployment in the last benefit year. Claims receipts dropped from 517,400 to 100,800 and the number of benefits certified from 448,200 to 79,400. Only 21,600 applications for certificate of benefit rights for 1942-43 were received during the year, com-

**HERE'S A TIME AND
LABOR SAVING DEVICE**



Never has time been so precious. Every hour conserved by reducing maintenance time saves that many hours of productive manpower.

One way to reduce maintenance time — and hence save vital manhours — is through the application of the Franklin No. 8 Driving Box Lubricator and Spreader.

Its steel spreader permits the ready removal of the cellar for cleaning and

repacking by preventing the driving box jaws from closing in and gripping the cellar. By simply removing the end plate, the entire cellar can be removed, and a packed cellar slipped into place. Also by keeping extra driving box cellars packed and ready for application, the repacking of journal boxes can be greatly speeded.

These distinctive features are especially welcomed today, when conservation of manpower hours is so vital.



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pared with 90,200 the year before. Of those who received benefits, 1,440 exhausted their accounts.

"While unemployment insurance activities fell off, operations of the employment service expanded. Job orders in 1942-43 were more than 200 per cent over those in the preceding year, and involved 288,100 openings. During the year, 196,600 placements were made, more than three times the number made in 1941-42."

Safety Congress to be Held in Chicago October 5-7

The National Safety Council will hold its annual Congress in Chicago on October 5-7. Meetings of the Steam Railroad section will be held at the Morrison Hotel on each afternoon of the three days, the tentative program being as follows:

OCTOBER 5

Greetings from the Safety section of the A.A.R. by O. F. Gnadinger, supervisor of safety of the Elgin, Joliet & Eastern.

Non-Train Accidents (Panel Discussion). Participants: O. F. Gnadinger, discussion leader; H. P. Allstrand, chief mechanical officer of the Chicago & North Western; E. J. Brown, engineer of track of the Chicago, Burlington & Quincy; H. J. Burkley, superintendent motive power of the Baltimore & Ohio; Armstrong Chinn, general manager of the Alton; H. R. Clarke, chief engineer of the Chicago, Burlington & Quincy; A. J. Finn, director of accident prevention of the St. Louis-San Francisco; and J. R. Tenney, superintendent of safety of the Western Maryland.

Election of 1943-44 Officers.

* OCTOBER 6

Train Service Accidents (Panel Discussion). Participants: T. D. Beven, vice-president of the Elgin, Joliet & Eastern; F. W. Curtis, superintendent of safety of the Denver & Rio Grande; S. C. Flagler, supervisor of safety of the Atchison, Topeka & Santa Fe; W. H. Hillis, operating officer of the Chicago, Rock Island & Pacific; W. W. Judson, general manager of the Northern Pacific; A. E. Kriesien, general manager of the Western district of the Frisco; G. H. Warfel, general safety agent of the Union Pacific; E. G. Weston, assistant general manager, Lines East, of the Chicago, Burlington & Quincy.

OCTOBER 7

War Fund to Conserve Manpower, by Chas. E. Hill, general safety agent of the New York Central.

Handling Explosives, by H. A. Campbell, chief inspector of the Bureau of Explosives.

Employees' Health in Wartime, by I. S. Cutter, M.D., Medical director of the Chicago & North Western.

Our Company's War Effort, by D. A. Crawford, president of the Pullman Company.

Trespassing, by H. A. Daake, supervisor of safety of the Erie.

Employee Morale, by H. C. Marmaduke, manager of the employee suggestion department of the Illinois Central.

Trucks and Buses Not Hit by Midwest Gas Cut

Reductions in the value of gasoline ration coupons held by passenger car drivers in the Middle West will not affect necessary commercial vehicle operation, Director Eastman of the Office of Defense Transportation announced last week. As claimant agency for gasoline for all highway transportation, the ODT on August 10 received from the Petroleum Administrator for War allotments of 390,787 barrels a day for District No. 2 and 126,757 barrels a day for District No. 3, it was explained, and within these quotas will allocate supplies to meet the requirements of buses, trucks, taxicabs and other commercial vehicles.

Truck Joint Action Plans

The Office of Defense Transportation has approved joint action plans for the conservation of equipment and manpower entered into by the Northern Pacific Trans-

port Company, controlled by the Northern Pacific, and the Flathead Transportation Company, providing for consolidation of operations between Missoula, Mont., and Kalispell, and between the Northern Pacific Transport Company and Cook & Fulmer, providing for co-ordination of operations between Butte, Mont., and Drummond. The first-named arrangement is expected to reduce truck operations about 79,000 miles annually and the latter about 6,000 miles.

at Hamilton, Ont., where he had been manager from 1930 until 1941.

S. R. Kallenbaugh, metallurgical service representative of the Timken Roller Bearing Company, Canton, Ohio, has been promoted to West coast district manager of the steel and tube division with headquarters at Los Angeles, Calif. Mr. Kallenbaugh was graduated from Mt. Union College and later took post-graduate training in metallurgy at Ohio State University. Until his recent promotion he was metallurgical service representative in Cleveland, Ohio and Detroit, Mich.

Albert S. Fromm, advertising manager of the Union Metal Manufacturing Company, Canton, Ohio, became mayor of that city on August 2, following the death of Mayor Ed S. Folk. Mr. Fromm became interested in politics as a hobby 15 years ago and since 1939 has been president of the city council. During the remainder of the year, while he completes the term of Mr. Folk, Mr. Fromm will continue as advertising manager of Union Metal on a part-time basis.

The Army-Navy "E" award for high achievement in the production of tanks, armor plate and bombs was presented to the Berwick, Pa., plant of the American Car & Foundry Co. on August 19. Major General L. H. Campbell, Jr., chief of ordnance, in a letter to Charles J. Hardy, president of the company, expressed his department's appreciation "of the fine help we have received from your great organization from the very beginning of our ordnance production program, nearly four years ago." Colonel D. H. Hauseman, chief of the Philadelphia, Pa., ordnance district, presented the award to Mr. Hardy. Other a.c.f. officials present included Frederick A. Stevenson, senior vice president in charge of production at all a.c.f. plants and W. L. Stancliffe, vice president in charge of munitions.

J. W. Hackett has rejoined the sales organization of the Okonite Company after a two-year period as associate engineer with the corps of engineers, War Department, and more recently with the production section military supplies, New York District. Prior to his work with the corps of engineers, Mr. Hackett was associated with Okonite for 15 years as a specialist in the sale of insulated wires and cables for railroads. During his earlier career, he was employed as an apprentice engineer with the Union Switch & Signal Co., as an engineer in the signal department of the New York Central, and with the Federal Signal Company, predecessor of the General Railway Signal Company. Mr. Hackett will be attached to the New York sales office of the Okonite Company where he will again specialize in sales engineering for the railroad department.

The National Malleable & Steel Castings Co., on the occasion of its 75th anniversary, has published a 36-page book of the company's history, for distribution to customers, stockholders and employees. The company was incorporated in Cleveland, Ohio, in 1868 as the Cleveland Malleable Iron Company and pioneered in

Supply Trade

Alfred E. Calkins, superintendent of equipment for the New York Central, has joined the Miller-Lewis Railroad Equipment Corporation as vice president. Mr. Calkins is vice president of the New York Railroad club.

W. E. Gadd, assistant eastern sales manager of the Rail Joint Company, Inc., has been promoted to eastern sales

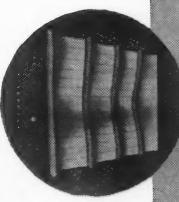


W. E. Gadd

manager, with headquarters as before at New York, to succeed the late R. R. Seward, whose death on July 3 was reported in the *Railway Age* of July 10. Mr. Gadd first entered the service of the Rail Joint Company in 1920, as an inspector at Philadelphia. In 1927, he was appointed a representative with headquarters at New York, holding this position until June 1 of this year when he was made assistant sales manager.

The presentation of Army-Navy "E" production awards to employees of the Fansteel Metallurgical Corporation and the Tantalum Defense Corporation was made on the plant grounds at North Chicago, Ill., on August 19.

Ralph C. Stuart has been appointed manager of the lamp division of the Westinghouse Electric & Manufacturing Co., with headquarters in Bloomfield, N. J. Mr. Stuart, who has been with the Westinghouse Electric & Manufacturing Co. and the Canadian Westinghouse Company for 25 years, was transferred to the Bloomfield headquarters plant of the division in January, 1941, from the West plant of the Canadian Westinghouse Company



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bringing the production of malleable iron into the midwest. Its founders, Alfred A. Pope, John C. Coonley, J. H. Whittemore, and Bronson B. Tuttle, established other malleable iron foundries in Chicago, Indianapolis, Ind., and Toledo, Ohio, which in 1891 were combined to form the National Malleable Castings Company. The present name was adopted in 1923. National headquarters and research laboratories are maintained in Cleveland while works are situated in Cleveland, Cicero, Ill., and Melrose Park in the Chicago area, Indianapolis and Sharon, Pa. Sales offices are located in Cleveland, Indianapolis, Chicago, New York, Philadelphia, Pa., St. Louis, Mo., and San Francisco, Calif.

The book develops the important part National Malleable products have played in the evolution of the American transportation industry. Castings were made 75 years ago for carriages, wagons, and buggies. These were followed by castings for the railroad, shipbuilding and automotive industries, and the company now produces certain types of castings for the aviation industry also. Other industries served by National Malleable include iron and steel, metal mining, coal mining, agricultural implements, pipe lines, construction, and hardware and plumbing supply. All of the company's plants are now virtually 100 per cent on war production. The Sharon Works received the Maritime Commission's "M" award in August, 1942, and an additional star for the pennant in April of this year, while the Indianapolis Works was given the Army-Navy "E" flag in June. Copies of the anniversary book are available on request from the company's headquarters at Cleveland.

Kenneth F. Cramer has been appointed district manager of the New York office of the **Baldwin Locomotive Works** to succeed **Joseph F. Hoerner**, who has been assigned to special duties in Washington, D. C. Following his graduation from Syracuse University in 1928 with a degree in mechanical engineering, Mr. Cramer



Kenneth F. Cramer

was employed at the Harrison, N. J., plant of the Worthington Pump & Machinery Corporation, and later at that company's Buffalo, N. Y., plant where he was test and experimental Diesel engineer. He

joined the McIntosh & Seymour Corporation, now the Diesel engine division of the American Locomotive Company, at Auburn, N. Y., in July, 1929. After serving for several months in the experimental and testing departments, he was transferred to the New York sales office and later returned to the main sales office at Auburn. He was subsequently placed in charge of McIntosh and Seymour Diesel sales in Chicago for two years. Before joining the Baldwin organization, Mr. Cramer was in private business two years. He began his association with the Baldwin Company in October, 1940, as Kansas City, Mo., district manager for the Diesel division. In September, 1942, he was transferred to the Chicago office, specializing in Diesel locomotive work. Since the war he has been dividing his time between the Baldwin offices in Kansas City, Chicago and Washington, in connection with negotiations with various branches of the Federal government and the armed forces. In his new position, Mr. Cramer will direct New York district sales for all divisions of the company.

Eldon R. Campbell, who has been associated with the mohair industry for many years, has joined the staff of the **Massachusetts Mohair Plush Company**, to handle railway sales. Mr. Campbell has



Eldon R. Campbell

specialized in the development and marketing of transportation fabrics and has long been identified with the railroad, bus, aircraft and furniture fields. His headquarters will continue to be at 2 Park Avenue, New York.

The name of the **Creepcheck Company** has been changed to **Unit Rail Anchor Company, Inc.**, a wholly owned subsidiary of Hubbard and Company, Tool division. **N. A. Howell** has been appointed district sales manager with headquarters at Chicago, and H. M. Fetterolf has been appointed special representative with headquarters at Pittsburgh, Pa.

Mr. Howell, who was born on May 19, 1891, at Temple, Texas, received his higher education, in engineering, at the University of Mississippi. Upon leaving the university in 1915, he became engaged in highway construction with the Wash-

ton County Highway Department in Mississippi, later being employed by several local drainage districts in that state. In February, 1917, Mr. Howell entered the employ of the Illinois Central, as a rodman, with headquarters at Dubuque, Ia., working in this capacity until April, 1918, when he entered army service. After serving 18 months in the army, more than 15 of which were spent in France with the 32nd Engineers, Mr. Howell re-entered the service of the Illinois Central as an instrumentman, with headquarters at Chicago. In February, 1927, Mr. Howell left the Illinois Central to become sales engineer of the Creepcheck Company, with headquarters at Chicago, which position he held until his recent promotion to district sales manager of the Unit Rail Anchor Company, Inc.

Equipment and Supplies

LOCOMOTIVES

The H. K. Porter Company, Inc., is manufacturing 23 locomotives for the Carnegie-Illinois Steel Corporation, including 6 Diesel-electric and 6 steam locomotives of the 60 and 35-ton classes, which will be used for handling scrap and ingots at the Homestead, Pa. works.

Construction

ATCHISON, TOPEKA & SANTA FE.—This road has awarded a contract to Robert E. McKee, Los Angeles, for the construction of a Diesel engine repair shop at San Bernardino, Cal.

ATLANTIC COAST LINE.—This railroad has authorized the construction of a three-story general office building at Wilmington, N. C., at estimated cost of \$225,000.

LOUISVILLE & NASHVILLE.—This road is re-arranging shop facilities for women workers at South Louisville, Ky., and is extending roundhouse stalls and pits at Decoursey, Ky., at a total estimated cost of \$105,855.

PENNSYLVANIA.—This road has recently begun an improvement program, at an estimated cost of \$3,500,000, which will include the following work: The laying of eight miles of new double track extending from a point two miles east of Pierron, Ill., to one mile east of Smithboro, the construction of additions to the enginehouse at East St. Louis, Ill.; the construction and lengthening of passing sidings at Clayton, Ind., and Bon Davis; the construction of two passing sidings at Pierron; the construction of a 540-ft. bridge over Little Shoal creek, midway between Pocahontas, Ill., and Stubblefield; and grade separations at four important highways.

FIRMNESS OF PURPOSE is one of the most necessary sinews of character and one of the best instruments of success Without it, genius wastes its efforts in a maze of inconsistencies.

Chesterfield



With the same firm purpose, we have held steadfast to basically correct and proved engineering principles that have improved boiler performance by the superheating of steam and the preheating of boiler feedwater.

The successful performance of Elesco equipment in thousands of steam locomotives, and industrial and marine plants throughout the world is significant testimony to the value of the engineering principles that underlie Elesco designs.



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Financial

ALTON.—*Reorganization.*—The Interstate Commerce Commission, by Division 4, has postponed until further order of the commission the hearing in the proceedings concerning this road's reorganization which has been ordered for September 8 at Chicago. The reorganization of the Kansas City, St. Louis & Chicago will be considered at the same time. The postponement was requested by the trustee to afford him time to prepare a proposed plan for reorganization under direction of the court.

CHESAPEAKE & OHIO.—*Bond Redemption Authorized.*—The board of directors of the Chesapeake & Ohio has authorized redemption, on September 20, of the railroad's \$1,380,000 refunding and improvement mortgage .85 per cent bonds, series G-3, due February 1, 1944, at full principal amount together with a premium of .20 per cent and accrued interest to that date. The redemption is in accordance with an agreement made with the Interstate Commerce Commission to expend during 1943 for long term debt retirement a sum equal to the \$5,200,000 of equipment trust certificates authorized by the commission in May. The agreement was made in view of the fact that the company had cash on hand adequate to finance the equipment purchase.

CHICAGO, BURLINGTON & QUINCY.—*Invites Tenders.*—The Chicago, Burlington & Quincy will receive tenders until August 25 for sale of its Illinois Division first mortgage 3½ and 4 per cent bonds due in 1949 at prices not exceeding par value.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Reorganization.*—The Interstate Commerce Commission has denied this road's application for reconsideration of its entire plan for reorganization, including receiving evidence with respect to changed conditions since the plan was formulated that were stated to have altered its financial position and traffic situation. Except with respect to the points for which the plan was referred back to the commission for further action by the courts, as noted in this column in the issue of July 10, page 75, the commission has thus again indicated its intention not to modify its plan for this company's reorganization. Hearings have been held on the specific questions upon which further consideration was requested by the courts.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization.*—A hearing before Commissioner Porter at Washington, D. C., September 1 has been ordered by the Interstate Commerce Commission to receive evidence solely upon the specific points about the plan for this road's reorganization to which the court has asked the commission to give further consideration. The questions involved are: Increased allocation of common stock to general mortgage bondholders; ratification by the court of appointments of reorganization managers; dis-

tribution among creditors of new bonds reserved under the plan to provide new money; a change in the effective date of the plan; compensation, if any, to Choctaw & Memphis bondholders for a reduced interest rate; distribution of cash among creditors; and any other adjustments the commission may deem appropriate.

SOUTHERN PACIFIC.—*Trackage Rights.*—The Texas & New Orleans has applied to the Interstate Commerce Commission for approval of a trackage-rights agreement covering joint use of the second of two parallel tracks in Shreveport, La., owned by the Vicksburg, Shreveport & Pacific and leased and operated by the Yazoo & Mississippi Valley. The distance involved is 1.22 mi., and the applicant, which has been operating over one of the tracks, wants to substitute double-track operation.

ILLINOIS CENTRAL.—*Refinancing.*—The Illinois Central will take bids on August 30 on a new issue of \$15,000,000 of equipment trust certificates, the proceeds of which will be used to liquidate its remaining indebtedness to the Reconstruction Finance Corporation. The new equipment issue will be secured by existing equipment, consisting of 582 locomotives, 535 passenger cars and 6,458 freight cars, which has a value, after depreciation, of \$30,170,347. The issue will be designated Series W, will be dated September 1, and will mature in 16 semi-annual installments. The first installment of \$945,000 will be due March 1, 1944, and thereafter the certificates will mature in amounts of \$937,000 on September 1 and March 1 of each year through September 1, 1951.

Bids on the new issue will be received by the railroad until noon on August 30. The interest rate is to be named by the bidders. It is anticipated that the interest rate will be 2½ per cent, or lower compared with the 4 per cent the road is now paying the R.F.C. An application seeking approval of the plan was filed with the Interstate Commerce Commission on August 14.

MAINE CENTRAL.—*Promissory Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue four promissory notes in the total amount of \$1,600,817.25 as evidence of unpaid balances on conditional sales contracts for equipment.

MISSOURI PACIFIC.—*Reorganization.*—The Railway Labor Executives' Association has filed with the Interstate Commerce Commission a petition seeking leave to intervene in this road's reorganization proceeding. R. L. E. A. wants the commission to amend the reorganization plan "by incorporating a fair and equitable arrangement for the protection of employees."

PENNSYLVANIA.—*Invites Equipment Trust Bids.*—The Pennsylvania has invited bids, August 23, on \$5,790,000 of 2½ per cent equipment trust certificates, due 1944 to 1958. These certificates represent the balance of an aggregate issue of \$12,240,000

under the railroad's equipment trust series N of which a previous issue of \$6,450,000 was sold in February. Proceeds of the entire issue will finance the construction and acquisition of five electric passenger locomotives, 51 steam locomotives and tenders, 30 steam locomotive tenders, six Diesel-electric switching locomotives, and 1,000 gondola cars, total cost of which is estimated at \$15,300,000. The equipment, excepting the Diesel engines, is under construction in the railroad's own shops.

Average Prices Stocks and Bonds

	Last Aug. 17 week	Last year
Average price of 20 representative railway stocks..	37.18	36.76
Average price of 20 representative railway bonds..	79.48	78.86

Abandonments

MONONGAHELA.—This road has applied to the Interstate Commerce Commission for authority to abandon an 0.89-mi. section of its Moser Run branch between Moser Run Junction, Pa., and Edenborn.

MONSON.—This road has applied to the Interstate Commerce Commission for authority to abandon its entire line from Monson Junction, Me., to Monson, 6.16 mi.

NORTHERN PACIFIC.—Examiner Jerome K. Lyle has recommended in a proposed report that the Interstate Commerce Commission approve this road's application for authority to abandon two branch lines totaling 37.7 mi.—the 20.6 mi. Taylors Falls branch extending from Wyoming, Minn., to Taylors Falls, and the 17.1 mi. Grantsburg branch extending from Rush City, Minn., to Grantsburg, Wis. While the applicant stated that all employees involved would be able to secure other positions by exercising their seniority rights, the examiner would nevertheless have the commission follow the "usual practice" of reserving jurisdiction for a period of two years to consider the question of whether conditions should be imposed for the protection of employees adversely affected.

PACIFIC ELECTRIC.—This road has applied to the Interstate Commerce Commission for authority to abandon a 4.67-mile segment of line extending from Riverside, Calif., to a point near Colton, in conjunction with a proposal to operate jointly with the Southern Pacific over a line of that road between the same points.

SOUTHERN PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon its 14.2-mi. line extending from a point near Truckee, Calif., to Lake Tahoe, Calif.

SOUTHERN PACIFIC.—The Texas & New Orleans has applied to the Interstate Commerce Commission for authority to abandon its 5.8-mi. line between Sena Junction, Tex., and Damon.

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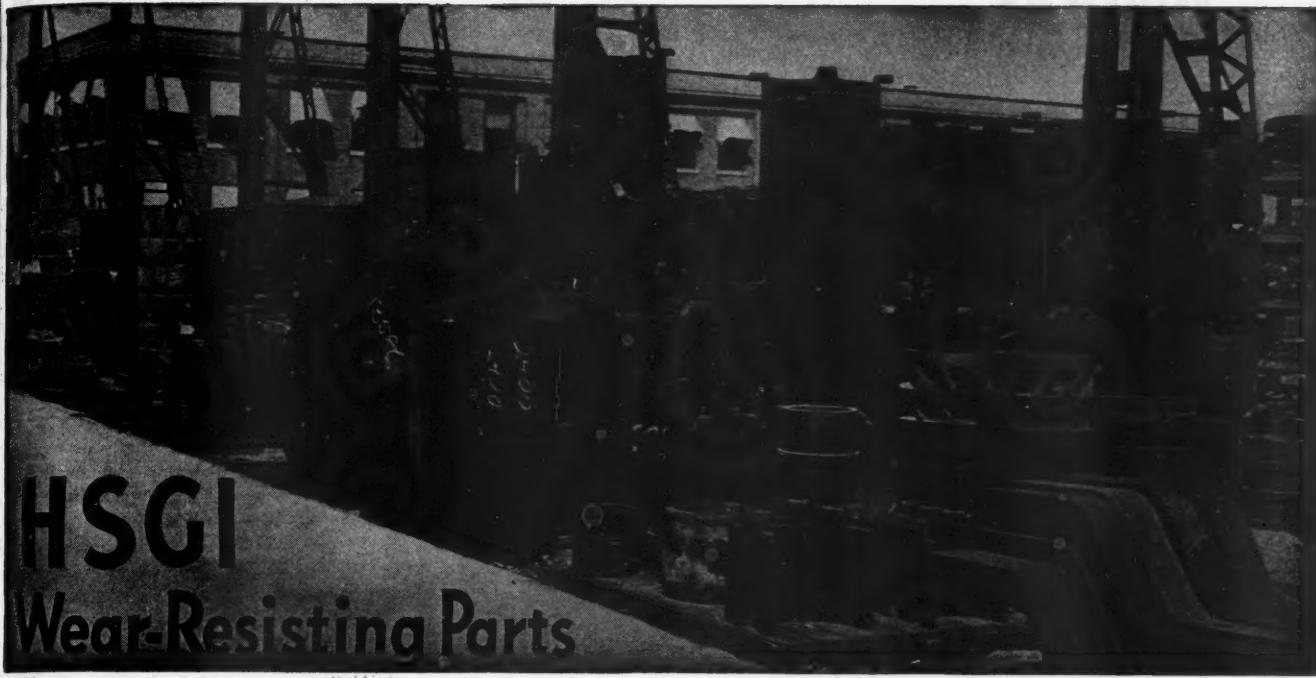
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HSGI Wear-Resisting Parts

REDUCE PRIORITY PROBLEMS

ANY material which offers maximum service life contributes to the war effort—less is required and therefore all industries can obtain higher priority ratings.

Due to its super wear-resisting properties HUNT-SPILLER Air Furnace GUN IRON is playing a big part in the battle to conserve materials.

Fewer replacements are necessary—this means fewer maintenance items and greater monthly mileage from each locomotive.



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Air Furnace

Railway Officers

EXECUTIVES

John G. Castle, assistant to manager, personnel, of the New York Central, has been appointed assistant to vice-president, personnel, with headquarters as before at New York. Mr. Castle, who was born at Yonkers, N. Y., attended New York University, and entered the service of the New York Central as a clerk in the purchasing department at New York on August 16, 1916. From 1920 to 1925 he was employed in the office of the engineer maintenance of way and in the office of the general claims attorney, serving as stenographer. On February 1, 1925, he was appointed head clerk in the office of the general claims attorney, becoming assistant secretary, board of pensions, on January 1, 1929, and secretary, board of pensions, with headquarters at New York, on November 16, 1935. Mr. Castle was appointed assistant to manager, personnel, at New York

On November 1, 1922, he was appointed chief clerk to vice-president, personnel, and on August 1, 1931, he became assistant to vice-president, personnel. When the National Railroad Adjustment Board was created in 1934, Mr. Abriel was appointed carrier member of the First Division and



W. G. Abriel

served until his recall to New York Central on January 1, 1936. On December 1, 1941, Mr. Abriel was appointed assistant manager, personnel, the position he held at the time of his recent promotion.

Carl Niderost, K.C., has been appointed assistant manager, department of personnel, of the Canadian Pacific, with headquarters at Montreal, Que.

J. A. Long, in addition to his office as general superintendent of the Hoosac Tunnel & Wilmington, has been elected vice-president, with headquarters at Readsboro, Vt.

Ross R. Marshall, vice-president of the Chesapeake & Ohio, the Pere Marquette and the New York, Chicago & St. Louis (Nickel Plate), has been promoted to senior vice-president of all three roads, with headquarters as before at Cleveland, Ohio.

been appointed terminal superintendent, with headquarters as before at Saint John, N. B., succeeding **J. M. Thompson**, who has been appointed superintendent of the Campbellton division, with headquarters at Campbellton, N. B.

Richard E. Johnson, whose promotion to superintendent of the Joint Texas division of the Chicago, Rock Island & Pacific, and also superintendent of the Burlington-Rock Island, with headquarters at Houston, Tex., was reported in the *Railway Age* of August 7, was born at Osawatomie, Kan., on November 10, 1909, and entered railway service in July, 1925, as a clerk of the Missouri Pacific, subsequently serving in several clerical capacities. On July 15, 1936, he became secretary to the general manager of the Rock Island, and one year later he was promoted to assistant trainmaster of the Arkansas division, with headquarters at Little Rock, Ark. On November 15, 1938, Mr. Johnson was advanced to trainmaster of the Oklahoma division, with headquarters at El Reno, Okla., and on September 1, 1940, he was promoted to assistant superintendent of the Missouri division at Trenton, Mo. In 1942 he was transferred to Herington, Kan., and late



John G. Castle

on January 1, 1942, the position he was maintaining at the time of his recent appointment as assistant to vice-president, personnel.

W. G. Abriel, whose appointment as manager, personnel, of the New York Central System, with headquarters at New York, was announced in the *Railway Age* of August 14, was born on April 29, 1886, at New Concord, N. Y. After graduating from the Whiteman School of Telegraph, he entered the service of the Delaware & Hudson as telegraph operator in July, 1902. In March, 1904, Mr. Abriel entered the service of the New York Central & Hudson River (now part of New York Central), and after serving as telegraph operator for three years, he was promoted to train dispatcher in 1907. In April, 1915, he was transferred to the office of the assistant vice-president, operations. During World War I, Mr. Abriel served in France with the 39th Engineers, returning to New York Central in August, 1919.



Richard E. Johnson

to Estherville, Iowa, remaining in that location until his new appointment, effective August 1.

B. M. Luttrell, assistant trainmaster of the Illinois Central at Memphis, Tenn., has been promoted to trainmaster of the Clarksdale, Cleveland, Helena and Riverside districts, with headquarters at Cleveland, Miss., succeeding **Walter McLaurin**, who has been assigned to other duties. **J. L. Beven, Jr.**, assistant trainmaster at Champaign, Ill., has been advanced to trainmaster of the Stuyvesant Dock Terminal, with headquarters at New Orleans, La., a newly-created position.

OPERATING

A. C. MacDonald has been appointed assistant to the general superintendent of the Canadian Pacific, Quebec district, at Montreal, Que.

R. D. Cates, safety supervisor of the Seaboard Air Line at Norfolk, Va., has had his headquarters moved to Jacksonville, Fla.

Angus F. McDougall, chief train dispatcher of the Canadian National with headquarters at Halifax, N. S., has been appointed assistant superintendent of the Campbellton division, with headquarters at Campbellton, N. B.

James Higgins Swetnam, joint terminal agent of the Canadian National, has

FINANCIAL, LEGAL AND ACCOUNTING

W. G. McVey has been appointed claims agent of the Central Vermont, with headquarters at St. Albans, Vt.

W. J. Wilding has been appointed district freight claim agent of the Canadian

Here's a Maintenance Tip—

Cars Built of Haskelite

Carrying Wartime

Traffic { WITHOUT EXCESSIVE DEPRECIATION

• Railroad car builders who had the foresight to specify Haskelite construction are watching Plymetl's war performance with increasing satisfaction. Ease of fabrication plus light weight and low cost of maintenance were the reasons for Plymetl's original specification. It is proving equal to the extreme stress of wartime passenger traffic.

PLYMETL ★ is metal-faced plywood of great rigidity and strength per pound of weight. Easy to fabricate, it provides a flat non-wavy surface. Plymetl saves pounds, eliminates welding in the face of partitions, provides desirable sound-deadening qualities, and tends to diminish objectionable and harmful vibration.

PLYMOLD* ★ Haskelite Plywood in a new structural form. Can be molded in compound curvatures; sections engineered to predetermined variations in thickness in the same panel; unusually large size panels. Now used to advantage in the mass production of material for the Armed Forces; it deserves careful investigation by future minded railway executives and design engineers.

*Trade Mark Reg. U. S. Pat. Off.

HASKELITE MANUFACTURING CORPORATION
Grand Rapids, 2, Michigan

Chicago, Ill.

Detroit, Mich.

New York City

HASKELITE

Plymetl

Phemaloid

National at Vancouver, B. C., succeeding **W. Carr**, who has been transferred to Toronto, Ont.

R. A. Givan has been appointed assistant auditor in charge of loss, damage and overcharge claims of the Atlanta & Saint Andrews Bay, with headquarters at Dothan, Ala.

TRAFFIC

L. B. Williams has been appointed general agent of the Quanah, Acme & Pacific with headquarters at Pittsburgh, Pa.

L. B. Kelz, general agent of the Mississippi Central, with headquarters at New York, has retired after 20 years of service.

Marie B. Hickey has been appointed passenger agent of the Atlanta & West Point, the Western of Alabama, and the Georgia, with headquarters at Atlanta, Ga.

W. F. Vitt, district passenger representative of the Missouri Pacific, has been appointed district freight and passenger agent, with headquarters as before at Philadelphia, Pa.

S. A. R. Lancto has been appointed general agent, freight department, of the New York Central, with headquarters at Newark, N. J., succeeding **F. J. Osborne**, who has been appointed general agent at New York.

John M. Sachen, general agent of the St. Louis-San Francisco (Frisco) at Kansas City, Mo., has been promoted to assistant to the chief traffic officer, with headquarters at St. Louis, Mo. **G. A. Morgan** has been appointed general agent at Kansas City, succeeding Mr. Sachen.

H. L. Gibbs, assistant general traffic agent of the Norfolk Southern, has been promoted to general traffic agent, with headquarters as before at New Bern, N. C., and **W. F. Mayhall** has been appointed assistant general traffic agent at New Bern, succeeding Mr. Gibbs.

M. C. Marquet has been appointed district freight agent of the Pennsylvania at New Haven, Conn., while **R. M. Roth** has been appointed district freight agent at Albany, N. Y., succeeding **W. F. Hoagland**, who has been transferred to Baltimore, Md., succeeding **T. F. Lawson**, who has been transferred to Rochester, N. Y.

R. M. Kendrick has been appointed division freight and passenger agent of the Southern at Columbus, Ga., while **W. F. Cochrane** has been appointed district freight and passenger agent at Greensboro, N. C., and **N. B. Ballinger**, traveling passenger agent, has been appointed district passenger agent, with headquarters as before at Jacksonville, Fla.

ENGINEERING & SIGNALING

L. A. Loggins, assistant supervisor of bridges and buildings of the Houston division of the Southern Pacific Lines in Texas & Louisiana, has been promoted to divi-

sion engineer of the Victoria division, with headquarters at Victoria, Tex., succeeding **C. N. Billings**, who has been transferred to the Dallas division, with headquarters at Ennis, Tex. replacing **H. Slabotsky**, deceased.

W. B. Lee, supervisor of track of the Western Maryland, has been appointed supervisor of work equipment, with headquarters as before at Hagerstown, Md.

J. F. Yerger has been appointed superintendent, telegraph and signals of the Lehigh Valley, with headquarters at Bethlehem, Pa.

MECHANICAL

E. M. Tapp, assistant master mechanic of the Union Pacific at Pocatello, Idaho, has been promoted to master mechanic of the Washington division, with headquarters at Spokane, Wash.

C. W. Brown, Jr., has been appointed engineer tests of the Western Maryland, with headquarters at Hagerstown, Md. The position of chief chemist, formerly held by Mr. Brown, has been abolished.

A. R. Carson, superintendent of shops of the Canadian National, has been appointed acting superintendent motive power and car equipment, with headquarters as before at Moncton, N. B.

Winsby Walker, general foreman of motive power shops of the Canadian National, with headquarters at Montreal, Que., has been appointed superintendent of the system's shops at Moncton, N. B.

SPECIAL

Joseph E. A. Gibault, assistant chief of research and development of the Canadian National, has been appointed chief of research, with headquarters as before at Montreal, Que. A photograph of Mr. Gibault, and a biographical sketch of his railway career appeared in the *Railway Age* of December 19, 1942, page 1020.

M. W. Maxwell, commissioner of development and natural resources, has been appointed chief of development, with headquarters as before at Montreal. Mr. Maxwell, who was born at St. David, N. B., spent several years after completion of his secondary education as a teacher in rural communities, later entering the University of New Brunswick in the civil engineering course. Before graduating therefrom, he spent several intermediate years as a school teacher and principal in Manitoba. In 1912 he was employed in the construction of the Mount Royal tunnel at Montreal and three years later was appointed to the forest products laboratories, McGill University, Montreal, as timber test engineer, carrying on research work on the strength functions of Canadian woods. During World War I he served overseas in England, France, Belgium and Germany, subsequently being appointed major commanding a battalion of Canadian engineers. In 1917 he was awarded the Military

Cross. In 1920 Mr. Maxwell became mine engineer and superintendent of silver properties at Alice Arm, B. C., and in the autumn of 1921 entered the Massachusetts Institute of Technology for post-graduate work in economics and industrial engineering. The following year he was employed with the Granby Consolidated Mining & Smelting Corp., at Anyox, B. C., in charge of sampling and ore distribution. This was followed by a reconnaissance trip through northern British Columbia as temporary assistant to Dr. George Hanson, Dominion Geological Survey. In 1923 he was appointed assistant director of the forest products laboratories at Montreal and reorganized its timber test work. On completion of the reorganization he entered the service of the Canadian National as assistant engineer in the Bureau of Economics, undertaking principally studies in connection with branch line extensions and abandonments and other research bearing on capital cost and expenditures. Mr. Maxwell then went to New York, first as special representative, then as natural resources engineer and later as industrial commissioner. From this office he supplied direct information with respect to



M. W. Maxwell

resources, industries, land and colonization features in the areas served by the Canadian National. In August, 1939, Mr. Maxwell was appointed commissioner of development and natural resources for the entire system, the position he was maintaining at the time of his recent appointment as chief of development.

OBITUARY

Charles E. Perkins, a director and member of the executive committee of the Southern Pacific, died recently at Santa Barbara, Cal., following a short illness.

T. F. Sullivan, master mechanic of the Texas & New Orleans, with headquarters at Ennis, Tex., died recently at his home in that city.

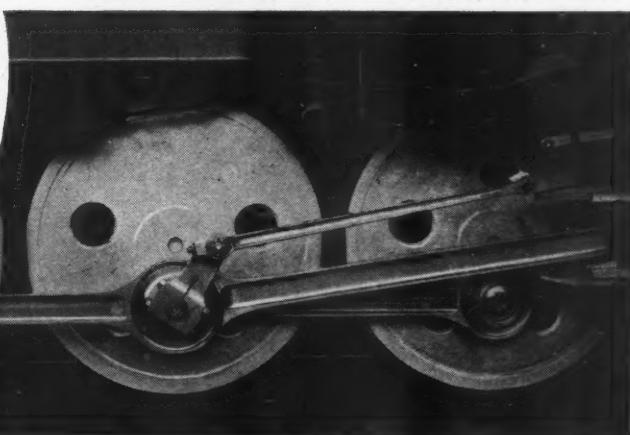
Edwin E. Eckert, industrial agent of the Akron, Canton & Youngstown, with headquarters at Akron, Ohio, died in that city on August 2, after 30 years of service.

William K. Etter, vice-president in charge of operations of the Atchison, To-

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Giant Hudson-type locomotive hauling the 20th Century. Below, close-up of the roller-bearing side rods.



An Aladdin's palace on wheels . . . to the public a symbol of all that is marvelous in transportation! To the railroad world, a challenge to further achievements in speed, design, and comfort. That's the 20th Century Limited!

In peace time a 16-hour New York-Chicago train, the Century, today, notwithstanding tremendous wartime traffic maintains a 17-hour schedule.

Giant Hudson-type locomotives of special design and construction get the Century

through on time. Lubrication has a part, too. New York Central uses Sinclair Garnet Mineral Valve Oil E.P. (extreme pressure) for dependable lubrication of locomotive roller bearing side and main rods.

Sinclair Garnet has extremely high film strength. It was specially developed for correct lubrication of roller bearings in heavy duty, high speed service.

Let our engineers tell you more about the advantages of using this oil.

SINCLAIR RAILROAD LUBRICANTS

SINCLAIR REFINING COMPANY, (INC.), RAILWAY SALES, NEW YORK • CHICAGO • SAINT LOUIS • HOUSTON

peka & Santa Fe, with headquarters at Chicago, died on August 16 at Los Angeles, Cal., while on a visit to that city.

Fred Johnson, chief special agent of the Great Western, with headquarters at

Des Moines, Iowa, died on August 10 following a heart attack while aboard a train en route to Dubuque, Iowa.

Ralph Durham Tobien, assistant to the chief engineer of the Southern, died on

August 15 after a long illness at the age of 62. Mr. Tobien was appointed to the position of assistant to the chief engineer at Washington, D. C., in November, 1942, but poor health prevented his assuming his new duties.

Operating Revenues and Operating Expenses of Class I Steam Railways

FOR THE MONTH OF JUNE, 1943 AND 1942

Item	United States		Eastern District		Southern District		Western District	
	1943	1942	1943	1942	1943	1942	1943	1942
Miles of road operated at close of month	229,302	231,368	56,427	56,891	43,430	43,821	129,445	130,656
Revenues:								
Freight	\$549,133,864	\$501,342,548	\$210,852,085	\$204,404,067	\$99,304,935	\$98,999,591	\$238,976,844	\$197,938,890
Passenger	147,293,877	82,268,397	59,687,521	39,003,564	28,990,855	15,424,973	58,615,501	27,839,860
Mail	9,717,485	8,596,275	3,434,977	3,172,785	1,737,171	1,548,178	4,545,337	3,875,312
Express	10,851,399	8,042,082	3,309,709	3,110,960	1,379,917	941,536	6,161,773	3,989,586
All other operating revenues.....	30,367,922	23,438,114	13,120,232	10,698,574	3,954,386	2,905,277	13,293,304	9,834,263
Railway operating revenues.....	747,364,547	623,687,416	290,404,524	260,389,950	135,367,264	119,819,555	321,592,759	243,477,911
Expenses:								
Maintenance of way and structures	92,084,958	69,579,961	34,592,472	27,904,592	15,572,622	11,263,876	41,919,864	30,411,493
Maintenance of equipment.....	115,095,986	100,935,981	49,106,635	44,889,643	21,426,650	19,530,671	44,562,701	36,515,667
Traffic	10,427,665	9,774,074	3,848,832	3,571,293	2,012,769	1,895,992	4,566,064	4,306,789
Transportation—Rail line	210,907,999	179,150,452	93,981,513	81,452,548	35,224,959	30,835,356	81,701,527	66,862,548
Transportation—Water line	5,920	458	.....	.....	.....	.....	5,920	458
Miscellaneous operations	8,697,841	5,903,723	3,122,864	2,342,650	1,369,176	928,783	4,205,801	2,632,290
General	14,725,169	13,127,365	5,826,836	5,261,269	3,021,632	2,560,558	5,876,701	5,305,538
Railway operating expenses.....	†451,945,538	378,472,014	190,479,152	165,421,995	78,627,808	67,015,236	182,838,576	146,034,783
Net revenue from railway operations								
Railway tax accruals	295,419,009	245,215,402	99,925,372	94,967,955	56,739,456	52,804,319	138,754,181	97,443,128
Railway operating income.....	168,726,888	110,492,169	52,748,936	41,433,871	34,266,076	28,938,684	81,711,876	40,119,614
Equipment rents—Dr. balance.....	126,692,121	134,723,233	47,176,436	53,534,084	22,473,380	23,865,635	57,042,305	57,323,514
Joint facility rent—Dr. balance.....	13,639,704	12,781,600	5,504,471	6,356,808	1,342,258	956,697	6,792,975	5,468,095
Net railway operating income.....	3,397,295	3,203,640	1,648,771	1,622,389	439,976	399,027	1,308,548	1,182,224
Ratio of expenses to revenues (per cent)	109,655,122	118,737,993	40,023,194	45,554,887	20,691,146	22,509,911	48,940,782	50,673,195
Depreciation included in operating expenses	60.5	60.7	65.6	63.5	58.1	55.9	56.9	60.0
Deferred maintenance — Way and structures	26,524,796	20,102,753	11,362,514	9,038,514	5,061,776	3,946,551	10,100,506	7,117,688
d 50,079	d 33,287	.....	.....	.....	.....	d 16,792	.....	.....
Amortization of Defense projects	11,272,708	7,213,897	4,044,894	2,353,671	2,690,338	1,938,664	4,537,476	2,921,562
Deferred maintenance—Equipment	d 42,979	.....	.....	.....	d 7,821	.....	d 35,158	.....
Major repairs—Equipment	150,000	.....	.....	.....	.....	.....	150,000	.....
Payroll taxes	16,859,408	14,288,650	7,073,889	6,238,971	2,903,719	2,504,105	6,881,800	5,545,574
Federal income taxes*	124,963,969	72,671,330	34,483,536	25,171,301	25,995,776	22,293,101	64,484,657	25,206,928
All other taxes	26,903,511	23,532,189	11,191,511	10,023,599	5,366,581	4,141,478	10,345,419	9,367,112

Item	FOR SIX MONTHS ENDED WITH JUNE, 1943 AND 1942							
	229,472	231,503	56,482	56,907	43,454	43,871	129,536	130,725
Miles of road operated at close of month	229,472	231,503	56,482	56,907	43,454	43,871	129,536	130,725
Revenues:								
Freight	\$3,305,862,460	\$2,673,161,613	\$1,302,078,295	\$1,118,391,084	\$651,166,001	\$534,274,464	\$1,352,618,164	\$1,020,496,065
Passenger	749,186,900	392,278,601	299,056,830	188,981,684	158,450,976	75,394,506	291,679,094	127,902,411
Mail	58,785,366	52,605,043	20,675,872	19,192,261	10,576,349	9,411,778	27,533,145	24,001,004
Express	62,288,370	41,069,233	21,635,091	14,497,406	10,186,660	7,125,231	30,466,619	19,446,596
All other operating revenues.....	170,534,448	121,644,536	75,819,161	57,913,571	22,988,368	15,959,115	71,726,919	47,771,850
Railway operating revenues.....	4,346,657,544	3,280,759,026	1,719,265,249	1,398,766,006	853,368,354	642,165,094	1,774,023,941	1,239,617,926
Expenses:								
Maintenance of way and structures	488,979,607	349,986,999	187,581,269	141,333,102	88,533,144	62,838,240	212,865,194	145,815,657
Maintenance of equipment.....	672,348,559	582,248,454	290,041,408	264,259,879	126,938,494	110,829,016	255,368,657	207,159,559
Traffic	61,560,228	58,169,873	22,545,171	21,082,528	11,868,100	11,580,632	27,146,957	25,506,713
Transportation—Rail line	1,270,746,322	1,058,007,610	576,075,650	486,628,831	218,135,158	180,874,694	476,535,514	390,504,085
Transportation—Water line	10,199	22,820	.....	.....	.....	.....	10,199	22,820
Miscellaneous operations	49,731,748	31,739,241	17,981,510	12,972,523	8,200,160	5,261,563	23,550,078	13,505,155
General	87,182,747	77,087,445	35,435,820	30,947,988	17,211,853	14,860,819	34,535,074	31,278,638
Railway operating expenses.....	‡2,630,559,410	2,157,262,442	1,129,660,828	957,224,851	470,886,909	386,244,964	1,030,011,673	813,792,627
Net revenue from railway operations								
Railway tax accruals	1,716,098,134	1,123,496,584	589,604,421	441,751,155	382,481,445	255,920,130	744,012,268	425,825,299
Railway operating income.....	914,847,901	488,283,697	302,178,369	197,371,278	226,960,666	127,800,768	385,708,866	163,111,651
Equipment rents—Dr. balance.....	801,250,233	635,212,887	287,426,052	244,379,877	155,520,779	128,119,362	358,303,402	262,713,648
Joint facility rent—Dr. balance.....	74,864,595	65,018,461	30,924,170	32,432,765	6,449,395	4,048,585	37,491,030	28,537,111
Net railway operating income.....	20,442,367	18,510,595	10,297,329	9,887,195	2,457,507	2,029,631	7,687,531	6,593,769
Ratio of expenses to revenues (per cent)	705,943,271	551,683,831	246,204,553	202,059,917	146,613,877	122,041,146	313,124,841	227,582,768
Depreciation included in operating expenses	60.5	65.8	65.7	68.4	55.2	60.1	58.1	65.6
d 159,153,334	d 117,346,015	d 67,904,210	d 52,944,144	d 30,316,061	d 23,867,791	d 60,933,063	d 40,534,080	.....
Deferred maintenance — Way and structures	d 402,691	.....	d 156,576	.....	.....	d 246,115	.....	.....
Amortization of Defense projects	62,943,273	33,631,667	23,378,502	11,186,124	15,451,335	8,621,168	24,113,436	13,824,375
Deferred maintenance—Equipment	d 298,335	.....	.....	d 34,109	.....	d 264,226	.....	.....
Major repairs—Equipment	850,000	.....	.....	.....	.....	850,000	.....	.....
Payroll taxes	97,307,876	81,130,635	41,594,288	35,828,342	17,195,902	14,413,019	38,517,686	30,889,274
Federal income taxes*	669,751,432	278,311,260	197,184,733	105,296,776	179,866,788	88,096,466	292,699,911	84,918,018
All other taxes	147,788,593	128,841,802	63,399,348	56,246,160	29,897,976	25,291,283	54,491,269	47,304,359

* Includes income tax, surtax, and excess-profits tax.

d Decrease, deficit, or other reverse items.

†Includes \$7,306,031 accrued in anticipation of major wage awards.

‡ Includes \$38,138,925 accrued in anticipation of major wage awards.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.
(Switching and Terminal Companies not included.)